INDEXES

AUTHOR INDEX

A

Abbott, J. A., 156
Abbott, J. R., 326
Abdullaev, G. B., 409
Abragam, A., 383, 384
Abraham, B. M., 4
Abraham, R. J., 380
Abrahams, M. S., 421
Abrahamson, E. W., 317
Abramova, L. V., 100
Aburto, S., 122
Accascina, F., 21, 22, 24, 25, 36
Acrivos, A., 396
Adam, F. C., 323
Adams, G. E., 100
Adams, M. C., 396
Adamsky, R. F., 421
Adamson, T. C., 393
Adlington, R. E., 420
Adrian, F. J., 370
Agnew, H. C., 153
Agron, P. A., 4
Ahlbeck, R. A., 178
Ainsworth, S., 324
Airoldi, G., 410
Aistova, R. I., 319
Akerman, I., 308
Akerstom, S., 373
Albers, D., 173
Albers, F. C., 292
Alberty, R. A., 315
Albrecht, A. C., 481, 486, 489
Albrecht, W. M., 418
Alder, B. J., 33, 157
Aleksandrova, D. M., 327
Alekseeva, A. V., 461
Alexander, A. E., 173
Alexander, D., 358
Alexander, D. M., 442, 443
Alexander, R. L., 363
Alexander, S., 312, 321
Alger, R. S., 102, 416
Alikhanov, P. P., 320
Allan, W. J., 422
Allard, J. G., 412
Allen, A. O., 95, 99
Allen, F. L., 506
Allen, G., 343, 416
Allen, H. J., 396
Allen, K. A., 37
Allen, L. C., 122, 123, 124
Allen, M. B., 516, 517, 519
Allen, P. W., 489
Allen, R. G., 69
Allen, R. L., 409
Allen, T. L., 9, 127
Allinger, J., 78
Allinger, N. L., 9, 11
Allison, M. F. L., 327
Allnatt, A., 268
Allred, A. L., 313, 318
Allred, W. P., 421
Altman, D., 392
Altman, R. L., 3, 5, 395
Alvang, F., 489
Amberg, C. H., 458
Amberger, E., 5
Ambler, E., 4
Ambrose, D., 349, 359
Amdur, I., 3, 4
Amelinckx, S., 411, 416, 420
Amesz, J., 317
Amfiteatrova, T. A., 181
Amis, E. S., 25, 324
Amphlett, C. B., 452
Anantakrishnan, S. V., 326
Anbar, M., 313, 319, 324
Andersan, M. A., 313, 318
Anderson, A. G., 376
Anderson, D. H., 379, 382
Anderson, E. W., 384, 385
Anderson, I. C., 518, 520
Anderson, J. M., 520, 525
Anderson, J. S., 285
Anderson, K. H., 45
Anderson, M. M., 137
Anderson, P. W., 375
Anderson, R., 369
Anderson, R. E., 369
Anderson, R. S., 383
Anderson, T. H., 102, 416
Anderson, W. A., 312
Anderson, W. S., 103
Andon, R. J. L., 7
Andreae, J. H., 314
Andreeva, N. V., 4, 8
Andrews, E. B., 136
Andrews, L. J., 71, 327
Androes, G. M., 375
Ang, F., 496
Angell, C. A., 287
Anno, T., 339
Anous, M. M. T., 4
Anson, P. C., 44
Anta, M. C., 97
Antell, G. R., 421
Anthony, D. S., 347
Antipin, L. N., 276, 289
Antonini, E., 309
Antonucci, L., 24
Antony, V., 326
Appelman, E., 324
Appleman, D., 512
Aprile, F., 318
Archer, E. M., 71
Archer, S. M., 524
Archibald, W. J., 488
Ard, W. B., 371
Argon, P. A., 296, 297
Armstrong, D. A., 94, 97
Arnold, D. S., 442
Arnold, R. T., 65, 143
Arnold, W., 504, 507, 508, 510
Arnon, D. I., 512, 514, 516, 517, 518, 519
Aronsson, B., 444
Arp, V., 375
Arreguin, B., 363
Arrigoni, O., 518
Artemchenko, A. I., 36
Arthur, W. R. B., 31
Artman, J. O., 383
Artmann, K., 121
Artym, R. I., 4
Arvia, A. J., 102
Asai, S., 467
Asano, Y., 451
Asdente, M., 408
Asgar, A. M., 125
Ash, O. K., 519
Ashton, H. M., 154
Asselmeyer, F., 452
Atack, D., 429
Atanasyan, E. N., 327
Atchison, W. F., 477
Auffray, J. P., 383
Augoyard, C., 381
Augustyniak, W. M., 416
Ausch, K. S., 362
Ausloos, P., 49, 57, 58, 101
Austin, J. M., 37
Auty, R. P., 164
Av, E. G., see Gil-Av, E.
Averbach, B. L., 416
Averbukh, D. D., 5
Avgul, N. N., 457
Avramescu, A., 4, 5
Avron, M., 517
Axilrod, B. M., 165
Axon, H. J., 281
Ayres, R. U., 114
Azarnoosh, A., 443
Aziz, P. M., 284
Azou, P., 444

B

Baak, T., 282

Baaz, M., 25, 26
Baba, H., 125
Babb, S. E., 142
Babbitt, J. D., 455
Bach, N. A., 100
Bachella, G. L., 409, 410
Back, R. A., 94
Backhurst, J. D., 65
Baddour, R. F., 455
Bader, R. F. W., 76, 322
Bailey, C. A., 4, 5
Bailey, W. C., Jr., 71
Bak, B., 378
Bak, T., 261, 268
Bak, T. A., 363
Baker, B. R., 324
Baker, C. G., 361
Baker, D. A., 123
Baker, E. B., 294
Baker, J., 372
Baker, J. M., 372
Baker, J. W., 65
Baker, W. J., 351, 356
Baker, W. M., 421
Balandin, A. A., 461
Balazs, E. A., 378
Baldwin, B. B., 119
Baldwin, H. W., 317
Baldwin, R. L., 488
Balescu, R., 225, 226, 236
Balk, P., 125
Ballinger, P., 76, 322
Ballinger, R. A., 136
Balluffi, R. W., 409, 416
Baltcheffsky, M., 518, 521
Balwit, J. S., 102, 103
Bamford, C., 327
Banaszak, L. J., 360
Bangham, A. D., 174
Bannister, T. T., 504, 505
Banwell, C. N., 378
Bapat, R. N., 138
Baranova, R. A., 4, 5
Barany, R., 4, 5
Barasch, 196
Barber, D. W., 358
Barbulescu, F., 327
Barfield, R. N., 315
Barker, R., 91
Barker, R. S., 123
Barker, S. A., 361
Barnard, J. A., 56
Barnes, G. T., 179
Barnes, R. G., 370, 371, 375
Barnett, M. P., 123, 394
Barr, S. J., 11
Barr, N. F., 95
Barr-David, F., 442
Barrer, R. M., 350, 421, 454
Barron, T. H. K., 4
Barrow, G. M., 124
Barrow, R. F., 4, 5, 8, 135, 136
Barry, T. I., 466
Bartenev, G. M., 181
Barth, C. A., 135, 383
Barth, H., 413
Bartky, I. R., 5, 8
Bartlett, J. H., 110
Bartlett, P. D., 65, 66, 73
Bartok, W., 93
Barton, J. G., 290
Baruch, M., 171, 172
Bascombe, K. N., 80
Basmadjian, D., 460
Basolo, F., 317, 318, 324
Bassett, G. A., 421
Bassham, J. A., 502, 508, 519, 522, 523
Bassi, D., 338, 339
Bastien, P., 444
Basu, S., 122
Batarunas, I. V., 120
Batdorf, R. L., 409
Bauer, N., 326
Baur, H., 125
Bawn, C. E. H., 486
Baxendale, J. H., 100
Baxter, R. A., 358
Bayer, E., 348, 355, 356
Bayles, J. W., 3
Baynham, J. W., 421
Bazley, N. W., 111, 392
Beaven, G. H., 143, 357
Beck, A., 361
Becker, E., 33
Becker, E. D., 377
Becker, M., 310, 314
Becker, R. S., 142, 144
Beckett, C. W., 3, 4
Beckey, H. D., 59
Beckwith, A. L. J., 65
Beckwith, J. B., 450
Bedford, R. G., 435
Beebe, R. A., 450, 458
Beek, L. K. H. van, 162
Beenakker, J. J. M., 4
Beever, R. B., 177
Begun, G. M., 89
Behrens, H., 394
Beileryan, N. M., 327
Bell, R. M., 82, 311
Bell, R. P., 65, 80, 327
Bellemans, A., 433
Belogurov, B. V., 4
Below, J. F., Jr., 317
Belyaeva, L. B., 4, 7
Belyakova, L. D., 457
Bemski, G., 416
Benard, J., 409
Benarie, M. M., 363
Bendel, S. H., 419
Benesi, H. A., 434, 468
Bengough, W. I., 9
Bennet, C. E., 358
Bennett, O. F., 77
Bennett, R. G., 92, 134, 383
Benoit, H., 479, 480
Bensen, P. R., 429
Benson, A. A., 523
Benson, B. B., 320
Benson, K. E., 414
Benson, S. W., 45, 54, 56, 57, 65, 69
Bercês, T., 43
Bereczky, L., 5
Berenbylum, L. S., 288
Berencz, F., 114, 121
Berezin, G. I., 457
Berg, D., 89, 94
Berg, H., 310
Berg, W. T., 4
Bergeon, R., 4, 5, 6
Berger, A., 313
Berger, A. W., 433
Bergeron, J. A., 509, 511, 518, 519
Bergmann, G., 354, 355
Bergmann, P. G., 196, 197, 203
Berkheimer, H. E., 81
Berkowitz, J., 4, 8, 11, 46
Berl, W. G., 400
Berliner, E., 65
Berman, R., 4
Bermes, E. W., Jr., 360
Bernal, I., 372
Bernardi, G. C., 7
Berne, E., 285
Bernheim, R. A., 313, 385
Berns, D. M., 34
Bernstein, H. J., 343, 376, 380
Bernstein, R. B., 56, 58
Berry, R. S., 125
Berry, V., 440
Bersohn, R., 369-90; 121, 370, 377, 381
Berthet, G., 383
Berthier, G., 121, 125
Besnainou, S., 125
Bessis, G., 125
Bethe, H. A., 396
Bethea, R. M., 352
Bethke, G., 135
Betina, V., 363
Beuche, F., 161
Beyer, H., 353, 469
Beynon, J. H., 351
Bibring, H., 444
Bickel, A. F., 65
Bickford, W. G., 362
Biedenharn, L. C., 109
Bigeleisen, J., 56, 342
Bigelow, C. C., 480, 494
Bijl, D., 383
Bikerman, J. J., 179, 449
Bilby, B. A., 419
Billeter, E., 376
Bills, D. G., 134
Bingel, W. A., 122
Bingham, S. A., 359

Biondi, M. A., 89
Birchenall, C. E., 8
Bird, G. R., 496
Bird, R. B., 261, 391
Birks, J. B., 144
Birnbaum, G., 152, 154
Birshtein, T. M., 479
Birss, F. W., 56
Bischoff, E., 173
Bishop, N. I., 514, 515, 520, 522
Biswas, B., 178
Bjerrum, N., 38, 165
Black, C., 441
Blackadder, D. A., 327
Blackall, E. L., 72
Blackburn, P., 5
Blade, J. C., 421
Blades, H., 34, 36
Blake, A. R., 47, 56
Blanc, M., 5
Blanchard, E. P., Jr., 66
Blander, M., 292, 293, 298, 299
Blankenship, F. F., 292, 298
Blass, V., 520, 525
Bleaney, B., 372
Blewitt, T. H., 416
Blinc, R., 6, 7, 339
Blinks, L. R., 506
Bliznakov, G., 453
Blocher, J. M., Jr., 5, 8
Block, H., 318
Block, J., 466, 467, 468
Block, R. J., 360
Bloembergen, N., 383
Bloemen, I. F., 7
Blois, S., 308
Blomgren, G. E., 273-306; 297
Bloom, H., 5, 275, 276, 279, 280, 283, 284, 290, 291, 293, 296
Blumberg, W. E., 34
Boardman, N. K., 293
Boata, G., 46
Bocchieri, P., 189
Bock, E., 25
Bockris, J. O'M., 275, 279, 282, 285, 287, 291, 292, 298
Boddy, P. J., 48, 49
Bodot, M., 322
Boehm, H. P., 451
Boemmel, H. E., 315
Boer, J. de, 154, 262
Boer, J. H. de, 458
Boerboom, A. J. H., 5, 11
Boffey, R., 177
Bogdanov, G. A., 327
Bogdenov, V. S., 93
Boggs, J. E., 153, 467
Bogle, G. S., 372
Bogolubov, N., 243
Bogomolov, A. M., 339
Bohemen, J., 350, 352
Bohon, R. L., 442
Bolef, D. I., 374
Bol'shakov, K. A., 5, 8
Boltaks, B. I., 409
Boltax, A., 420
Bolton, H. C., 156, 159
Boltzmann, L., 188
Bonauguri, E., 7
Bonner, J. M., 140
Bonse, U., 413
Booth, C., 485, 486
Booth, D., 140
Booth, F. B., 383
Borg, R. J., 444
Borisova, T. I., 162
Borrmann, G., 413
Bortner, T. E., 92
Borucka, A. Z., 285
Bosanquet, C. H., 349, 353
Bosch, E., 34
Bosch, F. M., 56
Bose, A. N., 56, 327
Bosjnakovic, F., 442
Boston, C. R., 295
Bother-By, A. A., 378
Bothwell, M. R., 294
Böttcher, C. J. F., 149
Bottomley, G. A., 6
Boudart, M., 464
Bourgon, M., 277
Bourlange, C., 5
Bourne, E. J., 361
Bovey, F. A., 376
Bowden, S. T., 7
Bowen, E. J., 312
Bowersox, D. F., 444
Bowman, A. L., 283
Boyd, D. R., 421
Boyd, G. E., 179, 417
Boyer, R. F., 493
Boyle, J. W., 98
Boys, S. F., 123
Boyton, H. G., 74
Brace, R. O., 352
Bradley, C. A., 337
Bradley, D. C., 7
Bradt, P., 46, 94
Bralsford, R., 137, 140
Brame, D. R., 453
Brandmüller, J., 343
Brandt, W. W., 349
Bratoz, S., 124, 125
Braunstein, J., 299
Braunstein, R., 421
Bray, K. N. C., 397
Bray, P. J., 370, 371, 373, 374
Brdička, R., 309, 310, 321
Brebick, R. F., 408
Breckenridge, R. G., 165
Bredig, M. A., 274, 282, 290, 292, 296, 297
Brehm, R. L., 394
Breitschwerdt, K., 316
Brenner, N., 359
Brenner, S. S., 422
Bretz, R. I., 291
Brewer, D. F., 4
Brewer, L., 4, 5
Bridge, K., 317
Bridgman, P. W., 4
Briegleb, G., 140
Bright, N. F. H., 281
Brigman, G. H., 117
Brill, A. S., 308
Brimelow, F. A., 466
Brinen, J. S., 142
Brinkman, J. A., 416
Brinton, R. K., 51
Brion, H., 122, 135
Briscoe, W. T., 28
Briukhanova, L. S., 181
Brewster, P. W., 28
Brewster, R. Q., 143
Brežina, M., 310
Brocklehurst, B., 137
Brockway, L. O., 467
Broda, A., 486
Brodersen, S., 335, 342
Brodnyan, J. G., 492
Brodskii, A. I., 319
Brodsky, A. M., 100
Brodský, J., 354
Brody, M., 506
Brody, S. S., 316, 317, 505
Broersma, S., 313
Broida, H. P., 94, 133, 134, 392
Bromberg, J. P., 296
Bromley, L. A., 4
Bronsted, J. N., 439
Bronstein, H. R., 282
Brooks, H., 415
Brooks, M. S., 7
Brossel, J., 384, 385
Brot, C., 162
Brouckère, L. de, 162
Brout, R., 193, 196, 225, 226, 227, 234
Brown, A. H., 501, 506, 524
Brown, A. M., 490
Brown, C., 433
Brown, D., 285
Brown, D. A., 121
Brown, D. W., 102
Brown, H. C., 327
Brown, I., 441
Brown, J. S., 505, 506
Brown, L. C., 378
Brown, N. L., 164
Brown, T. E., 515
Brown, T. H., 313, 382, 385
Brown, W. F., Jr., 149, 156, 157
Brown, W. G., 320
Brown, W. L., 416
Brown, W. R., 3, 8, 9

Browne, M. E., 372
Brownlee, L. G., 400
Brownstein, S., 72, 378
Brugger, J. E., 505
Bruice, T. C., 76
Bruin, F., 163
Bruijn, S. de, 125
Bruk, A. I., 352
Brun, M., 100
Brunauer, S., 180
Brunet, V., 57, 58
Brush, S. G., 157
Brutcher, F. V., Jr., 36
Bruylants, A., 327
Bryant, C. A., 375
Buckel'nikova, N. S., 89
Buckingham, A. D., 151, 152, 153, 154, 157
Buckley, F., 152, 156, 158
Bueche, A. M., 485, 487
Bueche, F., 491
Buehler, R. J., 298, 454
Bues, W., 296
Buff, F., 254
Buimistrov, V. M., 113
Bulewicz, E. M., 8, 11
Bullough, R., 408
Bultitude, F. W., 421
Bünau, G. v., 308
Bunnett, J. F., 75
Bunton, C. A., 72, 77, 319, 320
Bures, E., 442
Burge, D. E., 319
Burgess, D. S., 394
Burke, E. A., 117
Burkhard, W. J., 293
Burkus, J., 27
Burlakov, V. D., 4
Burns, G., 374
Burr, J. G., 101
Burton, M., 87, 94, 97, 99, 316
Burwell, R. L., 27
Busch, D. H., 318
Buss, W. C., 7, 9, 11
Butler, D., 136
Butler, T., 4
Buyers, A. G., 4, 8
Buzon, J., 359
Bykov, V. T., 452
Byrne, J., 281
Byron, S. R., 56

C

Cabrera, N., 418
Cadenhead, D. A., 452
Cafasso, F., 34, 36
Caffrey, J. M., 96
Cagnac, B., 384
Cahn, J. W., 419, 432
Calais, J. L., 115
Calcote, H. F., 395
Callear, A. B., 60
Callen, H. B., 196
Callomon, J. H., 137, 138
Calo, N., 519
Calvert, J. G., 41-64; 49, 51, 52, 54, 55, 56, 69
Calvin, M., 134, 502, 503, 507, 508, 511, 519, 520, 522, 523, 524, 525
Cameron, A. J. W., 144
Campbell, D. E., 392
Campbell, E. S., 392
Campbell, K. C., 463
Campbell, P. G., 77
Campi, E., 496
Canjar, L. N., 6
Cano, C., 442
Cantacuzene, J., 376
Cantow, H.-J., 494
Capindale, J. B., 519
Carassiti, V., 325
Caratheodory, C., 188
Carleton, N. P., 134
Carlson, C. M., 297
Carlson, R. G., 421
Carman, P. C., 455
Carmichael, J. H., 452
Carnevale, E. H., 315
Carpenter, D. K., 482, 490, 496
Carpenter, D. R., 378
Carr, J. S., 180
Carr, R. E., 392, 398
Carrier, G., 396
Carrington, A., 144, 383
Carroll, P. K., 135
Carruthers, P., 414
Carter, L. A., 508
Casabella, P. A., 370
Casassa, E. F., 477-500; 478, 482, 483
Cashion, J. K., 53, 54
Casimir, H. B. G., 196
Casinovi, G. C., 361
Castagnoli, G. G., see Gini-Castagnoli, G.
Castner, T. G., 374
Catalano, E., 6, 10
Cattrall, R. W., 324
Cayle, T., 523
Cederstrand, C., 506
Cerf, R., 491, 492, 495
Chakrabarti, J. K., 376
Chalk, A. J., 324
Chalmers, R., 506
Chalmers, R. V., 506
Chaltikyan, O. A., 327
Chalvet, O., 125
Chamberlain, N. F., 376
Chambré, P. L., 396
Chan, N. N., 381
Chance, B., 308, 520, 521
Chandrasekhar, S., 188, 203
Chandrasekharaiah, M. S., 3, 5
Chang, C. S. W., see Wang-Chang, C. S.
Chang, P. C., 100
Chanley, J. D., 178
Chapiro, A., 100
Chapman, S., 240, 391
Charlesby, A., 87, 99
Charman, H. B., 78
Charton, M., 71
Chatterji, A. K., 422
Chaujavek, P., 441
Cheek, C. H., 94
Chen, C. C., 119
Chen, D., 327
Chen, J. C., 98, 327
Chen, J. H., 10, 315
Chen, T. C., 121, 122
Cheng, S. I., 393, 399, 400
Cherneeva, L. A., 6
Chernyaev, I. I., 4, 5
Chernyak, N. Y., 99
Chertkov, B. A., 325
Chesick, J. P., 394
Chessick, J. J., 169, 180
Chessin, M., 514
Chew, W. W., 442
Chiang, Y., 327
Chiba, T., 369, 370
Chien, J.-Y., 489
Chilton, H. T. J., 101, 138
Chiltz, G., 45
Chinai, S. N., 497
Chirkov, N. M., 320, 378
Chitterji, A. C., 326
Chizhikova, G. I., 466
Chmutov, K. V., 349
Chodkowska, M. B., 486
Chou, C., 4
Chovin, P., 359
Chovnyk, N. G., 289
Chow, L. Y., 327
Christensen, A. U., 4, 5
Christie, M. I., 45, 53
Christofferson, S., 285
Chu, B. T., 394
Chu, M., 394
Chu, S.-Y., 5
Chu, T.-Z., 357
Chuburkova, I. I., 8
Chufarov, G. I., 5
Chukreev, N. Y., 289
Chupka, W. A., 4, 8, 11, 46, 88
Cialis, A., 143
Cignitti, M., 469
Cimino, A., 46
Cížek, J., 310
Claassen, H. H., 338, 339, 340
Claes, P., 100
Claesson, S., 316
Clare, J. W. H., 421
Clark, H., 458
Clark, H. C., 36, 141
Clark, J. T., 281
Clark, W. C., 145

Clarke, J. S., 429
Clarke, R. L., 409
Claussen, W. F., 421, 442
Clement, R. A., 322
Clementi, E., 3, 5
Clendenning, K. A., 511, 512
Cleveland, F. F., 339
Clinton, W. L., 122
Cloney, R. D., 123
Closs, G. L., 82
Closs, L. E., 82
Clough, K. H., 348, 359
Clough, S., 351
Clouston, J. G., 136
Cloutier, G. G., 89
Clusius, K., 4
Cobble, J. W., 417
Coch-Frugoni, J. A., 362
Coggeshall, N. D., 88
Cohen, A. D., 378
Cohen, D., 325
Cohen, M. H., 161, 374, 411
Cohen, S., 80
Coke, J. L., 9, 11
Colburn, C. B., 4
Cole, A. G., 5, 37
Cole, R. H., 149-68; 153, 158, 159, 161, 162, 164
Cole, T., 381
Coleman, B. D., 492
Coleman, J. W., 504, 521
Collin, J., 89
Collins, F., 240, 250, 251, 258
Collins, R. E., 179
Collins, R. J., 385
Collinson, E., 97, 103
Collison, R., 177
Coltman, R. R., 416
Combet-Farnoux, F., 125
Combrisson, J., 384
Commoner, B., 507
Compere, E. L., 327
Conneliy, B. T., 59
Connick, R. E., 313, 317 378
Connor, T. M., 376, 380
Conroy, H., 376
Consden, R. A., 361
Constabaris, G., 453, 459
Contopoulo, R., 523
Cook, E. H., 318
Cook, G. R., 137
Cook, H. D., 178
Cook, J. P., 283
Cook, M. W., 6, 7
Cooke, A. H., 6
Cooke, C. E., Jr., 179
Coolidge, A. S., 121
Cooper, C. F., 169
Cooper, G. D., 444
Cope, C. S., 9
Čopić, M., 491, 492, 495
Coppel, C. P., 317
Corbet, F., 469
Corbett, J. D., 290, 292, 293
Corbett, J. W., 254, 415, 416
Cordes, J. F., 3, 7
Cordier, P., 100
Corneliessen, R., 268
Cornish, F. W., 352
Cornwell, C. D., 370
Cosgrove, L. A., 281
Costello, J. M., 7
Cosway, H. F., 433
Cotton, F. A., 3, 4, 6, 378
Cottrell, A. H., 419
Coughlin, J. P., 4
Coulson, E. A., 7
Coulson, C. A., 124, 125, 344
Coulter, L. V., 5, 37
Coupland, M. J., 409
Coussemant, F., 327
Coverdale, C. E., 74
Cowan, C. T., 353
Cowen, H. C., 281
Cowen, J. A., 384
Cowling, T. G., 240, 391
Cox, J. D., 7
Cox, P. F., 385
Coyle, C. F., 363
Cracco, F., 100
Cragg, L. H., 480, 494
Craig, D. P., 125, 139, 143
Craig, R. S., 4
Cram, D. J., 78
Cramer, F., 360
Crane, F. L., 514
Crane, J., 492
Craubner, H., 483
Craven, J. M., 65, 141
Crawford, B., Jr., 340
Crawford, B. L., Jr., 337, 397
Cremer, E., 354
Crespi, H. L., 524
Cristau, B., 325
Crocco, L., 56, 399, 400
Crocco, L. G., 393, 399
Crocker, A. J., 468
Crooks, D. A., 351
Cross, P. C., 335, 341
Cruse, K., 30
Csavinszky, P., 122
Cubicciotti, D., 4, 5, 8, 290, 293
Cuccione, R., 408
Cullen, G. W., 29
Culver, R. V., 449, 462
Cuming, B. D., 180
Curl, R. F., Jr., 429
Curlock, W., 4, 8
Curtin, D. Y., 376
Curtis, E. C., 110
Curtiss, C. R., 241, 261, 298, 391, 394
Cvetanović, R. J., 5, 9, 46, 48, 49
Cynkin, M. A., 519
Cyphers, J. A., 392
Cyvin, S. J., 337, 339
Czaplinski, A., 459
Czapski, G., 325
Czekalia, J., 140
Czerlinski, G., 314, 315, 321, 323
Czyzak, S. J., 421

D

Dabora, E. K., 394
Dagonadze, R. R., 310
Dahl, J. L., 294
Dahlard, M., 143
Dainton, F. S., 5, 9, 46, 47, 97, 103, 140, 400
Dalby, F. W., 92, 134, 135, 138
Dale, W. J., 82
Dalgarno, A., 109, 119, 120
Dallevalle, J. M., 449
Dal Nogare, S., 358
Damask, A. C., 408, 416
Danes, V., 450
Danford, M. D., 296, 297
Daniel, H., 523
Danielli, J. F., 175
Daniels, F., 57, 397
Danil'chenko, P. T., 327
Danilov, V. I., 296
Danilova, A. I., 6
Dannhauser, W., 158, 161, 162
Danon, J., 485
Danon, J. S., see Seban-Danon, J.
Danti, A., 378
Dantuma, R. S., 276
Danusso, F., 496
Danyluk, S. S., 27, 32
Daoust, H., 485, 486
D'Aprano, A., 24
Darby, J. B., 409
Darnell, A. J., 4, 292
Darwish, D., 37, 327
Das, P. B., 28
Das, P. K., 28
Das, T. P., 34, 121, 123, 374, 377, 381
Dasgupta, S., 165
Dash, W. C., 414, 420
Dauben, H. J., Jr., 69
Daudel, R., 122
Daunt, J. G., 4
Davenport, H. E., 513, 517, 521
David, F. B., see Barr-David, F.
David, H. G., 316
Davidson, D. W., 161

Davidson, J. B., 507
Davidson, N., 57, 385
Davies, C. W., 27, 319
Davies, J. T., 170, 171, 172, 173, 174
Davies, M., 7, 158, 162
Davies, R. O., 315
Davis, H. S., 421
Davis, R. E., 319, 327
Davis, R. S., 410
Davis, T. W., 325
Davison, W. H. T., 99
Dawson, J. P., 3, 6, 7, 11
Dawson, L. R., 27, 28
Dawson, R. M. C., 174
Day, A. R., 327
Day, S. M., 373
Deal, C. H., 439
Deal, W. E., 394
Dean, R. B., 172
Debiais, L., 326
deBoer, J., see Boer, J. de
deBoer, J. H., see Boer, J. H. de
de Brouckère, L., see Brouckère, L. de
de Bruijn, S., see Bruijn, S. de
Debye, P., 152, 427, 431
Decius, J. C., 335, 341, 342
Decker, P., 361
Deckers, J., 395
Decora, A. W., 356
De Crescente, M. A., 9
Deemter, J. J. van, 349, 350, 351
Defay, R., 181
Degener, E., 326
De Graaff, W., 4
de Groot, D. G., see Groot, D. G. de
de Groot, M. S., see Groot, M. S. de
de Groot, S. R., see Groot, S. R. de
Dejak, C., 325
Dekeyser, W., 411, 416, 421, 453
Dekker, A. O., 398
Delahay, P., 288, 310, 321
de la Mare, P. B. D., see Mare, P. B. D. de la
Delbouille, L., 339
Delimarskii, Yu. K., 276, 280, 288, 289, 291
Del Re, G., 124
De Maeyer, L., 308, 311, 314, 315, 320, 321, 323
De Maria, G., 5, 11
Demeny, M., 178
Demkov, Yu., 107
den Hertog, H. J., see Hertog, H. J. den
Denison, J. T., 37
Denney, D. B., 67
Denney, D. J., 161
Deno, N. C., 81
Dent, L. S., 456
de Pradel, A. F., see Pradel, A. F. de
Derge, G., 277
Derjaguin, B., 170
de Roo, J. L., see Roo, J. L. de
Derr, E. L., 438, 439
Dervichian, D. G., 176, 177, 178
Deskin, W. A., 27
Desorbo, W., 410
deSousa, J. B., see Sousa, J. B. de
deSousa, S. B., see Sousa, S. B. de
Dessy, R. E., 378
Desty, D. H., 356
Desyatnikov, O. G., 294
DeTar, D. F., 65, 67
Detra, R. W., 396
Devay, J. E., 363
Devor, D. P., 372
de Vos, F. C., see Vos, F. C. de
DeVries, A. E., 99
DeVries, R. C., 422
Dewald, J. F., 418
Dewar, M. J. S., 65, 370
de Wet, W. J., see Wet, W. J. de
Dewhurst, H. A., 99
Dewing, E. W., 4
de Wirth, A., see Wirth, A. de
Dey, A. K., 362
Dharmatti, S. S., 378
Dibeler, V. H., 7, 11, 46, 89, 94
Dickens, P. G., 111
Dickenson, A. F. T., see Trotman-Dickenson, A. F.
Dickey, F. H., 457
Diebler, H., 314, 315, 317, 321, 323
Dieckert, J. W., 362
Dieke, G. H., 134
Dienes, G. J., 408
Diesen, R. W., 49, 53
Dikstein, S., 361
Diils, C. E., 73
Dimick, K. P., 357
Din, F., 433
Dinneen, G. U., 356
Dippy, J. F. J., 31
Dirske, T. P., 28
Dixon, J. A., 439
Dixon, R. N., 138
Dmitriev, M. T., 94
Dmitrievskii, O. D., 505
Doan, A. S., Jr., 293
Dobbs, F. W., 378
Dobrokhotov, G., 327
Dobrov, W. I., 372
Dobychin, D. P., 451, 452
Dodge, B. F., 9, 442
Dogen, H. W., 369
Doering, W. v. E., 74, 82
Doherty, P. E., 410
Dole, M., 102
Donaldson, D. M., 98
Donaldson, W. F., 394
Donath, W. E., 11
Dondes, S., 94
Donnet, J. B., 489
Dooley, D. A., 393
Dooling, J. S., 123
Doorn, A. B. C. van, 469
Dorfman, L. M., 93, 316
Dorofeeva, N. G., 32
Dorough, G. D., 524
Douglas, A. E., 135
Douglas, H. C., 511
Douglass, D. C., 369, 384, 385
Douillet, H., 371
Doull, N. J., 283, 284
Douslin, D. R., 3, 6, 7, 11, 12
Dowden, D. A., 468
Dowling, J. M., 337
Down, J. L., 34
Downing, J. R., 140
Doyle, M. V., 409
Doyle, W. T., 374
Doyle, W. V., 419
Drain, L. E., 456
Dransfeld, K., 315
Dravnieks, F., 383
Dreeskamp, H., 316
Dressler, K., 133, 138
Drew, C. M., 52
Dreyfus, B., 371
Drickamer, H. G., 140, 142
Drinkard, W., 377
Droege, J. W., 7
Drowart, J., 4, 5, 8, 11
Druding, L. F., 292
Dryden, J. S., 158, 164 165, 166
Dubinin, M. M., 451, 456
Dubois, J. E., 311
Dubsky, E. E., 354
Duff, R. E., 394
Duffin, H. C., 65
Dugdale, J. S., 5
Duke, F. R., 275, 283, 284, 285, 292, 293, 294, 326
Duke, J. F., 429
Dukes, E. K., 325
Dulin, C. I., 182
Dulova, V. I., 31
Duncan, A. B. F., 370
Dunford, H. B., 46
Dunlap, R., 394
Dunlap, R. D., 427-48; 434, 435

Dunstan, W., 413
Duodoroff, M., 523
Dupuis, M., 165
DuPuy, C. H., 357
Duranton, J., 523
Durham, L. J., 519
Durieux, M., 4
Durrum, E. L., 360
Durup, J., 100
Durup, M., 100
Dusolell, S., 45
Dutka, F., 320
Duynstee, E. F. J., 81
Duysens, L. N. M., 317, 504, 505
Dworkin, A. S., 285, 286
Dwyer, F. P., 327
Dyke, D. E. L., 436
Dylova, V. G., 82
Dyne, P. J., 96
Dzampov, B. V., 4, 5

E

Earerl, G., 384
Earhart, H. W., 74
Earley, J. E., 162
Ebbing, D. D., 121
Ebert, G., 454
Eberts, R. E., 5
Ebisuzaki, Y., 409
Ebsworth, E. A. V., 372
Eckart, C., 110, 391
Eckel, E. F., 392, 398, 399
Eckstrom, H. C., 465, 466
Edelson, M. R., 319
Edeskuty, F. J., 4
Edgecombe, F. H. C., 136, 141
Edmister, W. C., 10
Edmonds, D., 375
Edmonds, D. T., 6
Edwards, J. D., 281
Edwards, J. O., 326
Edwards, W. F., 74
Effer, D., 421
Effinger, I., 125
Egan, C. J., 7, 9, 11
Eggers, D. F., 339
Egorov, B. N., 6
Egorov, M. M., 457, 468
Egorova, T. S., 457, 468
Ehrenson, S., 327
Ehrenson, S. J., 70, 377, 378
Ehrett, W. E., 440
Ehrlich, G., 452, 456, 461, 462
Eichenauer, W., 5
Eichler, E., 323
Eido, R., 135
Eigen, M., 307-34; 165, 310, 311, 313, 314, 315, 316, 317, 318, 320, 321, 323
Einstein, A., 204
Eisenstadt, M., 5, 8, 290
Eisinger, J., 463
Eizner, Yu. E., 483, 490
Elbe, G. von, 392, 393, 395, 400
Elcock, E. W., 406
El'darov, F. G., 37
Eley, D. D., 467
Elias, H.-G., 488
Eliason, M. A., 43, 118, 121
Eliel, E. L., 9, 11, 90, 376
Elleman, T. S., 318
Elliott, A., 320
Elliott, G. R. B., 291
Ellis, A. J., 443
Ellis, R. B., 294
Ellis, S. G., 421
Ellison, H. R., 326
Ellwood, R. J., 353
Eloranta, J., 317
Elovich, S. Yu., 464
Elvidge, J. A., 380
Emeléus, H. J., 26
Emerson, R., 506, 507, 523
Emery, A. H., Jr., 481
Emery, A. R., 339
Emmett, P. H., 348, 449
Emmons, H. W., 392
Emschwiller, G., 322
Enghardt, R. D., 375
Enomoto, S., 339
Epifanov, G. I., 181
Epstein, M. B., 182
Epstein, S. T., 109
Erdey, L., 327
Erdey-Grûz, T., 28, 32
Erdös, E., 441
Eremin, E. N., 94
Erickson, E. E., 442
Eriksson, A. F. V., 495
Erlander, S. R., 488
Ermolaev, A. M., 107
Ermolaev, V. L., 504, 505
Ermolenko, N. F., 461
Erofeev, B. V., 9
Erpenbeck, J. J., 477, 478, 490
Erykalov, Iu.G., 72
Escue, R. B., 286
Esin, O. O., 289
Eskin, V. E., 480
Espagno, L., 444
Esplen, R. W., 6
Essen, L., 155
Etter, R. M., 81
Ettinger, R., 313
Ettre, L. S., 359
Etzel, H. W., 412
Euranto, E., 321
Evans, A. G., 31
Evans, B. L., 10
Evans, D. F., 139
Evans, F. W., 6, 7
Evans, J. C., 339
Evans, M., 513
Evans, T., 453
Evans, W. H., 2, 395
Evans, W. L., 81
Evelyn, S. R., 361
Everett, D. H., 452
Evers, E. C., 21-40; 33, 34
Eversole, R. A., 514
Evett, A. A., 461
Evseeva, N. N., 276
Ewing, A. J., 326
Ewing, C. T., 7
Eyraud, C., 469
Eyring, H., 43, 88, 123, 297, 298, 312, 323, 392, 492, 501, 511, 513, 515
Eyster, C., 515

F

Faber, R. J., 373
Fabri, J., 394
Fahrenfort, J., 467
Fahrig, R. H., 421
Fairbrother, D. M., 7
Fanelli, A. R., see Rossi Fanelli, A.
Fanica, L., 359
Fara, H., 409
Faraday, M., 273
Farmer, J. B., 383
Farnoux, F. C., see Combet-Farnoux, F.
Farnsworth, H. E., 465
Farr, J. D., 4
Fatt, I., 353
Fava, A., 327
Fay, J. A., 394, 396
Fedorov, P. I., 5, 8
Feenberg, E., 109
Feher, G., 373, 384
Feig, G., 67
Feinleib, M., 279
Fejes, P., 353, 451
Felden, M., 455
Feldman, D. E., 320
Fells, I., 322
Feng, P. Y., 100
Fenton, S. E., 65
Ferchmin, A. R., 156
Ferguson, J., 139
Ferguson, W. S., 288, 289
Fernandez, J., 144
Ferrand, R., 359
Ferrari, R. A., 523
Ferrell, R. A., 375
Ferry, J. D., 161
Feshchenko, V. G., 280, 288
Fessenden, R. W., 378
Fesshden, R. W., 378
Fettis, G. C., 45
Fickett, W., 394
Field, F. H., 51, 88, 90, 91
Fields, J. P., 400

Fierens, P. J. C., 69
Fieschi, R., 120
Figgis, B. N., 378
Filatova, E. D., 100
Filatova, N. V., 349
Filbert, A. M., 34
Finch, A., 5
Fineman, I. F., see Fögelstrom-Fineman, I.
Finkbeiner, H. L., 78
Finkelstein, M., 76
Fischer, A. G., 421
Fischer, A. K., 3, 4, 6
Fischer, F., 412
Fischer-Hjalmars, I., 121, 124
Fischer, L., 29
Fischl, F., 439
Fish, R. W., 73
Fisher, B. B., 434, 456
Fisher, F., 315
Fishman, M., 493
Fitzgerald, J. S., 357
Fixman, M., 250, 259, 478, 489
Flanders, D. A., 96, 97
Flautt, T. J., 370, 378
Fleisher, R. L., 421
Fleming, G., 137
Fleming, H., 281
Fleming, R. A., 283, 285
Flengas, S. N., 289, 290, 291, 292, 293, 299
Fles, M., 362
Fletcher, N. H., 420
Fletcher, S. E., 7
Flis, I. E., 327
Flid, R. M., 327
Flood, E. A., 281
Flood, H., 298
Florin, R. E., 102
Flory, P. J., 478, 481, 482, 483, 484, 485, 486, 487, 489, 490, 495, 496
Flournoy, J. M., 383
Flubacher, P., 5
Flynn, C. P., 375
Fock, V., 107, 119
Fögelstrom-Fineman, I., 525
Fok, N. V., 53
Folberth, O. G., 5
Foley, H. M., 119
Folman, M., 179, 468
Foner, S. N., 94
Forbes, W. F., 142, 143
Ford, J., 192
Forestieri, A. F., 409
Forland, T., 282, 298
Forsen, S., 378
Forstat, H., 4
Förster, T., 312, 316, 504
Fort, T., Jr., 173
Forti, G., 513
Foster, C. T., 5
Foster, J. F., 488
Foster, J. M., 123
Foster, L. M., 282
Foster, R., 140
Fournoy, J. M., 416
Fowden, L., 376
Fowkes, F. M., 172, 182
Fowles, G. W. A., 34, 35
Fox, R. E., 88
Fox, T. G., 496
Fraenkel, G., 66
Fraenkel, G. K., 308
Fraga, D., 429
Franc, J., 361
Francini, M., 289
Franck, J., 504, 505, 506
Frank, F. C., 177, 413
Frank, P. W., Jr., 33, 34
Frank, W. B., 282
Frankel, S., 182
Frankevich, E. L., 91
Franklin, J. L., 7, 11, 46, 88, 89, 94, 133
Franzen, V., 65
Franzosini, P., 4
Fraser, M. J., 174, 175
Fraser, P. A., 136
Fraser, R. T. M., 323
Fredricks, P. S., 44, 45
Freed, S., 33
Freeman, A. J., 120
Freeman, M. P., 353, 433, 453, 459
Freeman, N. C., 397
Freeman, R., 378
French, C. M., 28
French, C. S., 501, 505, 506, 514
Frenkel, A., 516
Frenkel, A. W., 509, 511, 518, 524
Frenkel, J., 277
Freund, T., 325
Frey, H. M., 51, 83
Freymann, M., 380
Freymann, R., 380
Fricke, H., 96, 97
Friedel, J., 444
Friedel, R. A., 90
Friedman, L., 88
Friedman, R., 392, 398
Friedrick, H. G., 464
Friend, J. A., 143
Frisch, H. L., 187-272; 189, 192, 197, 246, 249, 268, 419, 494
Frisman, E. V., 495
Fritz, J. J., 4
Froese, C., 120
Fröhlich, H., 149, 158
Frohnsdorff, G. J. C., 458
Frolov, B. A., 457
Frőman, A., 111, 115, 121
Frost, A. A., 110
Frost, D. C., 89
Frow, F. R., 7, 11
Frugoni, J. A. C., see Coch-Frugoni, J. A.
Fruin, R. E., 434
Frye, C. L., 78
Fuchs, R., 327
Fueki, K., 467
Fuhs, A. E., 394
Fujimori, E., 507
Fujimoto, M., 372
Fujita, H., 488
Fujita, Y., 460
Fujiwara, S., 376, 380
Fukui, K., 125
Fuller, C. S., 38, 419
Fuller, R. C., 518, 520
Funabashi, K., 92
Funasaka, W., 451
Fuoss, R. M., 21, 22, 23, 24, 25, 28, 29, 38, 327
Furrow, S. D., 435
Furry, W., 236
Furuhawa, T., 361
Futami, S., 103
Futrell, J. H., 92

G

Gabor, J., 178
Gaddy, V. L., 443
Gaffron, H., 501, 522
Gager, W. B., 383
Gagneux, A., 74
Gaibakyan, D. S., 327
Gaines, G. L., Jr., 455
Gál, D., 320
Galatry, L., 4, 5, 6
Galavanov, V. V., 416, 421
Gallardo, R., 122
Galmiche, J., 523
Gambaryan, N. P., 65
Gambill, W. R., 287
Ganguly, A. K., 96, 97
Garber, R. A., 31, 80
Gardner, H. J., 275, 278, 291
Gardner, R. A., 465
Gardon, J. L., 489
Gareri, G., 46
Garland, C. W., 465
Garner, F. H., 181
Garner, M. D. G., 428
Garnett, J. L., 320
Gärtner, K., 452
Garton, G., 295
Garvin, D., 57, 135
Garwin, R. L., 384
Gaskins, F. H., 492
Gaspar, N. J., 310, 321
Gáspár, R., 122
Gasser, R. P. H., 378
Gattow, G., 4, 5, 8
Gatty, O., 172
Gaur, H. C., 288
Gavuzzi, P., 317
Gawronska, B., 486
Gaydon, A. G., 136, 137,

392, 400
Geckler, R. D., 398
Geddes, J. A., 37
Gee, G., 485, 486
Gehman, W. G., 292
Gel'derikh, V. A., 4
Gelles, I. L., 373
Genco, J. I., 421
Gensamer, M., 181
Gentner, W. A., 515
George, A., 3, 6, 12
Gerasimov, Ya. I., 4, 292
Gerber, M. I., 327
Gerdes, W. F., 349
Gerding, H., 296
Gere, E. A., 373, 384
Gergely, J., 378
Gerhauser, J. M., 123
Gerischer, H., 309, 310
Germagnoli, E., 409, 410
Germain, J. E., 449
Gerold, V., 413
Gerritsen, H. J., 372
Gersmann, H. R., 321
Geschwind, S., 372, 385
Gesler, R. L., 394
Geusic, J. E., 383
Geymer, D. O., 485
Ghose, T., 123, 377
Ghosh, D. K., 381
Ghosh, S., 326
Giacometti, G., 47, 48, 49, 59
Giauque, W. F., 4, 5, 8
Gibbins, S. G., 5, 378
Gibbs, M., 519, 522
Gibson, Q. H., 309
Giddings, J. C., 347-68; 43, 123, 349, 350, 351, 352, 360, 361, 363, 392
Gierst, L., 309
Giese, C. F., 4, 8, 11
Gifford, E. M., 511
Gil-Av, E., 357
Gilbert, A. R., 444
Gilbert, M., 392
Gilbert, T., 114
Gilchrist, A., 162
Gilkerson, W. R., 24
Gill, D., 32, 313, 378
Gill, E. K., 41, 42, 60
Gill, G. S., 392, 398, 399
Gillam, E., 467
Gilles, P. W., 4
Gillespie, A. S., Jr., 291
Gillespie, R. J., 29
Gillespie, T., 360
Gilliland, A. A., 5, 12
Gilliland, E. R., 455
Gillis, H. A., 103
Gilman, J. J., 414, 420
Gilvarry, J. J., 120
Ginell, R., 397
Giner, J., 310, 321
Gini-Castagnoli, G., 264
Giovanelli, J., 513
Girifalco, L. A., 409
Givens, W. G., Jr., 44
Gjaldbaek, J. C., 443
Gjertsen, L., 323
Glagolev, N. I., 181
Glarum, S. H., 159
Glaser, M. B., 9
Glassman, I., 56
Glick, R. E., 70, 327, 376, 378
Gliemann, G., 123
Glock, R. E., 377
Gloersen, P., 137
Glover, K. H., 28
Glueckauf, E., 350, 353
Goates, J. R., 440
Gobeli, G. W., 416
Goble, A. G., 359, 360
Godet, M. R., 357
Godfrey, F. M., 356
Godiev, I. N., 4
Godnev, I. N., 5
Godsave, G. A. E., 392, 398
Goedheer, J. C., 504, 510, 519
Goering, H. L., 69, 421
Golay, M. J. E., 350, 351, 352
Gol'bert, K. A., 461
Gold, A., 120
Gold, R., 337
Gold, V., 318
Goldblatt, M., 339
Goldburg, W. I., 383
Golden, S., 114, 120
Goldfinger, P., 4, 5, 8, 11, 45
Goldman, K., 433
Goldsmith, M., 392, 398
Goldstein, H. W., 4, 5
Goldstein, J. H., 376, 378
Goldstein, L., 4
Golik, A. Z., 28
Gollnick, E., 326
Golomolzina, M. V., 5
Golub, M., 491
Gombás, P., 120, 122
Gomel'skii, K., 5
Gomer, R., 456, 458, 465
Gonikberg, M. G., 327
Good, R. J., 180
Good, W. D., 3, 6, 7, 12
Goodkin, J., 134
Goodman, L., 142
Goodwin, H. M., 276
Goodwin, S., 376
Goodwin, T. W., 521
Gopal, R., 429
Gordeev, I. V., 4, 5, 9
Gordeeva, V. A., 451
Gordon, A. H., 361
Gordon, A. S., 51, 52
Gordon, B. M., 323
Gordon, D. A., 66
Gordon, J. E., 339
Gordon, P., 421
Gordon, S., 325, 395
Gordus, A. A., 58
Gordy, W., 101, 381, 383
Goring, D. A. I., 493
Görriz, A. M., 7
Gorsuch, P. D., 422
Goss, A. J., 420
Gossard, A. C., 375
Gotlib, Yu. Ya., 479
Gottschal, A. J., 4
Gotz, K. G., 176
Goulard, R., 396
Gould, E. S., 65
Goulden, J. D. S., 27
Gourse, J. A., 376
Gouterman, M., 383
Grace, J. A., 141, 383
Grace, M. A., 375
Grad, H., 193, 229, 231, 246, 400
Graff, C., 320
Graham, D., 458
Graham, J. B., 461
Graham, R. L., 4
Grahn, R., 124
Granata, S., 409
Grandmontagne, R., 135
Gränicher, H., 165
Grant, D. M., 312, 379
Grave, L., 369
Gray, B. F., 109, 119, 122
Gray, J. D., 117
Gray, P., 4, 8, 10, 55, 65
Graziano, F. D., 318
Greaseley, P. M., 77
Greases, J. C., 135
Greaves, J. C., 57
Green, D., 516, 520
Green, H. S., 243
Green, L., Jr., 398, 400
Green, L. C., 119
Green, M., 76, 245, 254
Greenbaum, M. A., 67
Greenberg, J., 295
Greene, L. C., 421
Greene, R. F., 196
Greenfield, B. F., 452
Greenwood, N. N., 277, 296
Gregg, S. J., 353
Grey, J., 399
Griessbach, R., 452
Grifalco, L. A., 180
Griffing, V., 122, 123
Griffis, R. C., 4
Griffith, W. C., 396
Griffiths, J. H. E., 372
Grigorenko, F. F., 288
Grimes, W. R., 292, 293
Grimley, R. T., 3, 5
Grimley, T. B., 478, 482
Gringrich, N. S., 254

Grishko, N. I., 320
Grishna, G. S., 523
Griskey, R. G., 6
Grjotheim, K., 298
Grob, C. A., 74
Gromes, W., 451
Gronowitz, S., 380
Grønvold, F., 4
Groot, D. G. de, 418
Groot, M. S. de, 315
Groot, S. R. de, 151
Gross, B., 163
Gross, E. P., 154, 197
Gross, R. A., 394
Grosse, A. V., 433
Grossweiner, L. I., 144
Groth, W., 59
Grove, D. J., 88
Grovenstein, E., Jr., 66
Grover, J. H., 394
Gruen, D. M., 292, 295
Gruenwald, T. B., 56
Grumbt, J. F., 442
Grumer, J., 394
Grunwald, E., 81, 313, 321, 443
Gruver, J. T., 69
Grűz, T. E., see Erdey-Grűz, T.,
Guastalla, J., 170
Guenebaut, H., 136
Guenther, W. B., 56
Gueron, M., 374
Guggenheim, E. A., 154, 293, 427
Guide, R. G., 362
Guild, L. V., 359
Guiochon, G., 359
Gunn, E. L., 452
Gunn, S. R., 12
Gunning, H. E., 59
Gunzel, F. H., Jr., 418
Gupta, B. K., 121
Gupta, Y. K., 326
Gur'ev, M. V., 90
Gurvich, L. V., 4
Gur'yanova, E. N., 320
Gutfreund, H., 76
Guthrie, G. B., 6, 79
Gutmann, V., 25, 26, 29, 320
Gutowsky, H. S., 312, 313, 379, 381, 382, 385
Guttman, S., 319
Gyani, B. P., 327
Győrgyi, A. S., see Szent-Győrgyi, A.
Gyunner, E. A., 327

H

Haans, A. J. M., 519
Haar, K., 34
Haber, C. P., 4
Haber, R. G., 9, 11
Habermann, H. M., 518
Habgood, H. W., 351, 358, 459
Hacke, J., 416
Hadley, W. B., 4
Hadzi, D., 339
Hagstrom, S., 121
Hahn, E. L., 193
Haissinsky, M., 87
Halevi, E. A., 125
Hall, D. N., 315
Hall, E. H., 5, 8
Hall, E. O., 444
Hall, G. G., 111, 126, 127
Hall, J. R., 296
Hall, K. P., 398
Hall, W. K., 359
Halpern, J., 324
Halsey, G. D., Jr., 432, 433, 453, 454, 456
Haltgren, R., 445
Ham, F. S., 419
Hamamura, T., 470
Hamann, S. D., 316, 327
Hamby, W. E., 320
Hameka, H. F., 121, 124, 125, 383
Hamill, W. H., 87-106; 87, 91
Hamm, R. E., 319
Hammel, E. F., 4
Hammerle, W. G., 162
Hammes, G. G., 315, 318, 321
Hammett, L. P., 31, 81
Hamming, M. C., 90
Hamon, B. V., 164
Handler, P., 463
Hanlan, J. F., 351, 353, 459
Hannaert, H., 69
Hannay, N. B., 407-26
Hanrahan, R. J., 434
Hansen, B., 321
Hansen, O. H., see Holm-Hansen, O.
Hansen, R. P., 357
Hansen, R. S., 181, 453
Hanst, P. L., 55, 56
Happe, J. A., 32, 377
Harada, R. H., 421
Haranath, P. B. V., 135
Harborne, J. B., 361
Harbottle, G., 417
Harbourn, C. L. A., 356, 359
Harden, J. C., 358
Harding, S. W., 491
Hardwick, R., 324
Hardwick, T. J., 98
Hardy, C. J., 348, 349, 354
Hariharan, T. A., 339
Haring, H. E., 418
Harkness, A. C., 324
Harman, T. C., 421
Harper, D. O., 7
Harrap, B. S., 276, 277
Harrell, R. W., 142
Harrington, G., 144, 284, 295
Harris, D. M., 8
Harris, F. E., 157
Harris, G. M., 318
Harris, G. S., 26
Harris, J. F., 327
Harris, P. V., 137, 140
Harris, R. A., 241, 245
Harris, R. F., 5
Harris, W. E., 348, 349, 350, 352, 358
Harrison, A. G., 60, 325
Harrison, A. J., 137
Harrison, S. E., 372
Harrje, D. T., 399
Hart, E. J., 95, 96, 97, 325
Hart, E. W., 432
Hart, H., 73
Hart, R. W., 400
Harteck, P., 46, 94
Hartel, J., 362
Hartley, R. D., 362
Hartman, P., 453
Hartman, T. C., 421
Hartmann, H., 123
Hartree, D. R., 120
Hartshorn, L., 155
Hartwig, W., 413
Hartzler, H. D., 82
Hase, E., 523
Hass, W. P. A., 375
Hassion, F. X., 162
Hatchett, J. L., 514
Hatton, W. E., 4
Hattori, S., 378
Haubach, W. J., 460
Hauck, F., 78
Hausdorff, H. H., 348
Hauser, C. R., 27
Hausser, K. H., 383
Havemann, R., 325
Havriliak, S., 164
Hawke, J. C., 357
Hayakawa, Y., 289
Hayashi, V. K., 100
Hayaski, S., 380
Haycock, E. W., 418, 419
Haydon, D. A., 169, 172
Hayek, E., 363
Hayes, W., 372
Hayward, D. O., 465
Hazato, G., 380
Hazebroek, H. F., 467
Head, A. J., 362
Head, E. L., 4
Heastie, R., 432
Heath, C. E., 93
Heath, D. F., 338, 341
Hebel, L. C., 375
Heckmann, K., 176
Hedges, R. M., 125

Heerden, C. van, 351
Heicklen, J., 58
Heiland, G., 463
Heilbronner, E., 80
Heilmann, R., 140
Heims, S. P., 394, 397
Heineken, F. W., 163
Heise, J. J. 507
Heise, M., 395
Helfand, E., 246, 249, 261
Helferich, F., 351
Heller, C., 381
Heller, C. A., 49, 51, 52
Heller, W., 495
Hellin, M., 327
Hellman, M., 363
Hellwege, K. H., 4
Helmholz, L., 372
Hemmer, P. C., 189
Hendricks, S. B., 513
Henglein, A., 87, 92, 383
Henin, F., 188, 226
Henschke, E. B., 422
Hepler, L. G., 4
Herail, F., 377
Herbrandson, H. F., 69
Herington, E. F. G., 7
Herk, L., 327
Herling, J., 357
Herman, A., 463
Herman, R., 392, 458
Hermans, J., Jr., 480
Hermans, J. J., 477, 480, 493, 497
Herr, C. H., 439
Herrick, E. C., 82
Herron, J. T., 46, 94
Hersch, H. N., 412
Hersh, C. K., 433
Hertog, H. J. den, 68
Hertz, H. G., 313
Hertzsch, R., 30
Herve, J., 383
Herzberg, G., 133, 134, 138, 335, 341
Herzog, W., 285
Hesketh, R. V., 412
Hettler, H., 362
Hewitt, R. R., 375
Heymann, E., 276, 277, 279, 283, 293
Hiatt, R. R., 65, 66
Hickham, W. M., 88, 89, 94
Hickman, D. D., 511
Hickmott, T. W., 462
Hicks, C. L., 429
Hidvégi, J., 28, 32
Hieber, W., 4
Higashimura, T., 103
Higgins, H. C. L., see Longuet-Higgins, H. C.
Higham, P., 378
Highkin, H., 506
Hildebrand, J. H., 429, 432, 433, 434, 438, 443
Hildebrandt, A. F., 383
Hildenbrand, D. L., 4, 6, 7, 10, 11
Hill, D. G., 27, 291
Hill, K. L., 515
Hill, N. E., 160
Hill, P., 457
Hill, R., 501. 502, 513, 517, 521
Hill, S., 280
Hill, T. L., 33, 206, 453
Hiller, L. A., Jr., 477.
Hilliard, J. E., 432
Hills, G. J., 288, 292
Hilton, J. L., 515
Himes, J. B., 361
Himmelblau, J., 443
Hindman, J. C., 325
Hine, J., 65-86; 70, 71, 78, 79, 81
Hinkelbein, J. A., 8
Hinkson, J. W., 518
Hinshelwood, C. N., 41, 56, 327
Hirai, M., 412
Hirai, N., 297, 493
Hires, J., 327
Hirota, K., 383, 466, 467
Hirschfelder, J. O., 43, 118, 121, 124, 126, 261, 298, 391, 392, 394, 454
Hirst, R. C., 312
Hjalmars, I. F., see Fischer-Hjalmars, I.
Hnizda, V. F., 35
Hoar, T. P., 417, 418
Hoare, D. E., 57
Hoare, M. R., 56
Hobbs, M. O., 518
Hoch, M., 5
Hochanadel, C. J., 98
Hochberg, A., 276
Hodek, J., 459
Hodgdon, R., 67
Hodge, A. J., 509, 510
Hodgins, J., 34, 36
Hodgson, C., 459
Hodgson, G. W., 457
Hoering, T. C., 319
Hoeve, C. A. J., 479
Hofacker, L., 124
Hoffman, J. D., 163, 165
Hoffman, R. A., 380
Hoffman, A. K., 67
Hogg, M. A. P., 5
Hohlstein, G., 34
Hoijtink, G. J., 125
Holbrook, K. A., 322
Holland, R., 138
Hollas, J. M., 139, 143
Holley, C. E., Jr., 4, 5, 6
Holm, C. H., 34, 312
Holmes, E. L., 421
Holm-Hansen, O., 519, 523, 525
Holøien, E., 119
Holser, W. T., 4
Holt, A. S., 511
Hommelen, J. R., 181
Hon, J. F., 373, 374
Honeycombe, R. W. K., 420
Honig, J. M., 449, 450
Honig, R. E., 452
Hood, S. L., 515
Hooley, J. G., 451
Hooper, H. O., 370
Hopkins, C. Y., 376
Horák, Z., 121
Horani, M., 137
Hordis, C. K., 362
Horecker, B. L., 522
Horiuchi, J., 320
Hornig, A. W., 372
Hornig, D. F., 342
Horning, E. C., 356
Horsfield, A., 36, 141
Horyna, J., 442
Hosemann, R., 413
Hoskins, R. H., 372, 383
Hossenlopp, I. A., 6, 7, 11
Hou, Y. C., 7
Houska, C. R., 416
Houtgraf, H., 296
Hove, L. van, 219, 221, 223, 224, 225, 227
Howe, L. L., 134
Howell, K. M., 121
Howell, L. J., 280
Hoytink, G. J., 141
Hu, J.-H., 4
Hubbard, W. N., 7, 11
Huber, E. J., Jr., 4
Hubert, T. D., 3, 5, 10
Hückel, W., 65
Hudda, F. G., 452, 456
Hudson, D. E., 5
Hudson, G. V., 79
Hudson, R. F., 76
Hudson, R. G., 292
Hudson, R. L., 94
Hudson, R. P., 4
Huff, V. N., 395
Huffman, R. E., 57
Huggins, C. M., 378, 429
Huggins, M. L., 478, 485
Hughes, A., 175
Hughes, E. A. M., see Moelwyn-Hughes, E. A.
Hughes, E. D., 65, 72, 78
Hughes, S. R. C., 31
Huguet, M., 359
Huhn, P., 43
Hulme, K. F., 409
Hulthén, E., 135
Hultsch, R. A., 375
Humbel, F., 164
Humphrey, R. E., 29
Hunt, H., 7
Hunt, J. P., 317

Huque, M. M., 493
Hurley, A. C., 122, 135
Hurst, G. S., 92
Hurst, R. P., 117, 120, 122
Hurwitz, H., 309
Hurzeler, H., 137
Husain, D., 44
Husband, L. J. B., 293
Husimi, K., 113
Husson, F., 176, 179
Huston, J. L., 320
Hutchison, C. A., Jr., 33, 139
Huybrechts, G., 45
Huyskens, P., 100
Huzinaga, S., 123
Hyde, A. J., 480
Hylleraas, E. A., 107, 119
Hyman, H. H., 31, 80
Hyne, J. B., 377

I

Iagodovskii, V. A., 454
Ib'in, B. V., 457
Ibuki, S., 421
Ichenoke, S., 339
Iczkowski, R. P., 135
Ignatowicz, S., 279, 282
Iguchi, K., 139
Ikeda, R. M., 44
Ikeda, T., 416
Ikeda, Y., 492
Ikegami, H., 395
Ikenoue, T., 380
Iliceto, A., 327
Illuminati, G., 318
Imamura, A., 125
Imelik, B., 467
Inami, Y. H., 37
Inczédy, J., 327
Indelli, A., 324
Ingalls, E. N., 155
Ingalls, R. B., 138
Inghram, M. G., 5, 11
Ingold, C. K., 65, 72, 76, 78
Ingraham, M. G. M., 137
Ingraham, T. R., 291
Ingram, D. J. E., 55, 374
Inman, D., 288, 292
Innes, A. C. R., see Rose-Innes, A. C.
Iofa, B. Z., 5
Irmak, L. R., 519
Irmler, H., 413
Isaacs, N. S., 65, 327
Isaacson, L. M., 124, 477
Ishimori, F. T., 319
Isihara, A., 482, 483, 484
Isirikian, A. A., 457
Isobe, T., 380
Isoda, H., 392, 398
Ito, K., 380
Itoh, J., 372, 378
Iudina, I. V., 181
Ivanov, O. A., 53
Ivanovskii, L. E., 288, 289, 291
Iverson, M. L., 275, 292
Ivin, K. J., 5, 7, 9, 46, 47, 140
Iwamoto, R. T., 325
Iwamura, T., 523
Izbekov, V. A., 289
Izrailevich, E. A., 320
Izuyama, T., 124, 125

J

Jackson, J. A., 313
Jackson, J. L., 123, 409
Jackson, L., 196
Jackson, L. M., 380
Jackson, L. C., 433
Jacob, J., 8
Jacober, W., 29
Jacobs, E. E., 511
Jacobs, T. A., 391-406
Jacques, J. K., 136
Jaffé, H. H., 80, 378
Jaffe, I., 2
Jaffray, J., 453
Jagendorf, A., 516
Jagendorf, A. T., 512, 513, 514, 515, 516, 517, 518
Jahn, D., 310
Jain, D. V. S., 56
Jakubec, I., 362
Jakuszewski, B., 5
James, A. T., 357
James, D. W., 284
James, H. M., 121, 152, 164
James, W. J., 465
Janak, J., 351, 354, 357
Jander, G., 26, 29, 30, 37
Jander, J., 327
Janeschitz-Kriegl, H., 495
Jansen, L., 150, 151, 153
Janz, G. J., 4, 9, 27, 32, 275, 278, 284, 291
Jarmain, W. R., 136
Jarnagin, R. C., 327
Jarry, R. L., 4
Jarvie, J. M. S., 46
Jaulmes, P., 349
Jay, J., 327
Jencks, W. P., 78
Jenkins, A. E., 418
Jensen, F. R., 327
Jentzsch, D., 354, 355
Jepsen, D. W., 43
Jepson, J. B., 363
Jessup, R. S., 486
Jobard, M., 485
Johanssen, N., 135
John, R. R., 394
Johns, J. W. C., 136
Johns, T., 352
Johnsen, U., 4
Johnson, C. E., 375
Johnson, E. A., 143, 357
Johnson, F. A., 5
Johnson, G. W., 444
Johnson, H. R., 121
Johnson, H. W., 359
Johnson, H. W., Jr., 352
Johnson, J. S., 307-34
Johnson, J. W., 274, 292
Johnson, L. F., 376
Johnson, M. D., 71
Johnson, O., 4
Johnson, O. H., 308
Johnson, R. E., 94
Johnson, R. E., Jr., 179
Johnson, R. L., 319
Johnson, R. W., 325
Johnson, W. H., 5, 8, 12
Johnston, H. L., 4, 5
Johnston, T. L., 419
Johnston, V. D., 356
Johnston, W. G., 414
Jokl, J., 361
Joly, M., 178
Jona, F., 164
Jones, A. C., 468
Jones, A. H., 7
Jones, A. R., 94
Jones, D. A., 372
Jones, L. H., 339, 340, 341
Jones, W. J., 337
Jones, W. L., 349, 350
Jortner, J., 35, 135, 325
Jost, W., 392, 395, 400
Julius, J., 459
Jullien, J., 322
Jura, G., 429, 432
Jurinak, J. J., 459
Jursa, A. S., 135, 137, 138

K

Kabayama, M. A., 485
Kac, M., 189, 198, 234
Kadanoff, L. P., 375
Kadesch, R. R., 145
Kaenzig, W., 411
Kaganer, M. G., 451
Kahane-Paillous, J., 138
Kahlweit, M., 311
Kainer, H., 383
Kaiser, W., 407-26; 419
Kakayanagi, K., 4
Kale, M. N., 55
Kamen, M. D., 518, 521
Kamimura, H., 120
Kamio, S., 376
Kamiyoshi, K., 455
Kammermeyer, K., 461
Kampen, H. van, 198
Kanda, Y., 139
Kandler, O., 522

Kanekar, C. R., 378
Kaneko, Y., 320
Kan'kovskiĭ, R. T., 4
Kanna, B. N., 135
Kantro, D. L., 180
Kanzig, W., 374
Kaplan, H., 123
Kaplan, J., 33, 135
Kaplan, J. G., 174, 175
Kaplan, J. I., 312
Kaplan, L., 326
Kappler, E. Z., 413
Kapulla, H., 310
Kapustinskiĭ, A. F., 4, 5
Karchmer, J. H., 357
Kargin, V. A., 491
Karlovitz, B., 394
Kármán, T. von, 392, 393
Karo, A. M., 122, 123
Karpachev, S., 276
Karplus, M., 124, 374, 379, 380, 383
Karr, C., 144
Karreman, G., 144
Kasha, M., 134, 504, 509
Kassel, L. S., 41
Katayama, M., 320, 376, 380
Kates, D. F., 377
Kato, H., 125
Kato, T., 107, 119
Kato, Y., 370
Katz, D. L., 433
Katz, E., 507
Katz, J. J., 144, 524
Katz, N. Y., 319
Kaufman, J. J., 89
Kauman, W. G., 363
Kauzmann, W., 161
Kavetskiĭ, V. I., 120
Kavtaradze, N. N., 461, 462
Kawai, K., 339, 340
Kawai, T., 493
Kawane, M., 451
Kay, R. L., 21-40; 21, 22
Kay, W. B., 440
Kaylor, C. E., 5
Kazanski, M. F., 457
Kebarle, P., 60
Keefer, R. M., 327
Keen, R. T., 358
Keenan, T. A., 152
Keesom, P. H., 3, 5, 375
Kegeles, G., 488
Keier, N. P., 466
Keith, W. A., 7, 12
Kelker, H., 358
Keller, R. A., 347-68; 363
Kelley, C. M., 290
Kelley, K. K., 3, 4, 5, 8, 10
Kelley, W. S., 69
Kellogg, H. H., 280
Kellogg, R. E., 110
Kelly, R., 46
Kelso King, N., 327
Kemball, C., 450
Kember, N. F., 362
Kemp, J. E., 409
Kemp, N. H., 396
Kempa, R., 322
Kendall, W. B., 445
Keneshea, F. J., Jr., 4, 290, 293
Kennedy, A., 4
Kennedy, A. J., 5
Kennedy, G. C., 4
Kennedy, J. M., 96
Kenright, R., 54
Kenttämaa, J., 37
Kernohan, R. A., 416
Kerr, J. A., 47, 48, 49 50, 51, 52
Kertes, A. S., 361
Kessler, E., 515
Ketelaar, J. A., 321
Ketley, A. D., 76, 322
Ketudat, S., 370
Keulemans, A. I. M., 348, 349, 359
Keyes, F. G., 153, 154
Keyes, R. W., 124, 264
Kezdy, F. J., 327
Kharasch, N., 327
Khokhlov, S. F., 285
Kholtanskikh, Y. B., 289
Khomyakov, K. G., 4, 5
Khrapova, E. V., 454, 458
Kibeler, V. G., 93
Kido, H., 289
Kiess, N. H., 392
Kikuchi, C., 372
Kilb, R. W., 481, 485, 491
Kilpatrick, D. H., 409
Kilpatrick, J. E., 4, 11
Kilpatrick, M., 32
Kim, C. S. Y., 82
Kim, I. N., 31
Kimball, G. E., 123
Kimball, W. A., 178
Kimura, H., 410
Kimura, M., 378
Kimura, T., 123
Kinbara, T., 395
Kincheloe, T. C., 6
King, A. B., 50, 88
King, A. D., Jr., 142
King, B. R., 4
King, E. G., 3, 4, 5
King, G. W., 139
King, K. M., 119
King, N. K., see Kelso-King, N.
King, P. J., 374
King, W. T., 340
Kingsbury, C. A., 78
Kingston, A. E., 119
Kingston, G. L., 152, 456 458
Kinoshita, T., 107, 111, 119
Kinoshuta, K., 182
Kinsinger, J. B., 496
Kiperman, S. L., 461
Kiraly, J., 451
Kirchner, F., 458
Kirk, M. R., 522
Kirkbride, F. W., 9
Kirkwood, J. G., 158, 162, 164, 203, 206, 215, 228, 229, 231, 240, 241, 242, 243, 249, 250, 251, 254, 263, 394, 456, 489, 490
Kirshenbaum, A. D., 433
Kirzhnitz, D. A., 119
Kiselbach, R., 349
Kiselev, A. V., 454, 457, 458, 468
Kiselev, V. F., 457, 459, 468
Kister, A. T., 427, 439, 442
Kistiakowsky, G. B., 45, 46, 57, 394
Kitaĭgorodskiĭ, A. I., 327
Kitamura, M. Y., 137
Kitchener, J. A., 169, 172, 279, 282, 285
Kittel, C., 33, 264
Kivelson, D., 337, 377
Kjeldaas, T., Jr., 88
Klabunde, C. E., 416
Klainer, S. M., 488
Klamer, K., 351
Klanberg, F., 5
Kleerekoper, L., 153
Klein, G., 196
Klein, R., 46, 457, 465
Klemens, P. G., 414
Klemm, A., 285
Kleppa, O. J., 444
Kline, R. J., 325
Klinkenberg, A., 349, 350, 351
Klochkov, V. P., 7
Klontz, E. E., 416
Klotz, H., 5
Klotzsh, H., 522
Knaggs, I. W., 280
Knapp, H., 433
Knewstubb, P. F., 395
Knight, A. R., 142
Knight, H. T., 394
Knight, J. A., 469
Knight, W. D., 34, 375
Knorre, H., 326
Knox, G. R., 376
Knox, J. H., 45, 360
Knox, R. S., 120, 411
Knunyants, I. L., 65
Kobanovsky, Y. A., 100
Kobayashi, R., 440
Kobayashi, S., 120
Kobe, K. A., 6, 10

Kobozev, N. I., 94
Koch, E., 312
Kochanova, L. A., 181
Kocheshkov, K. A., 100
Kodera, K., 450
Koedam, M., 452
Koefoed, J., 439
Koehler, M. F., 4
Koelmans, H., 173
Kcerner, W. E., 57
Kofler, M., 376
Koga, T., 232
Kohler, M. M., 119
Koide, S., 120
Kojima, J., 355
Kojima, K., 9, 10
Kojima, S., 370
Kok, B., 504, 506
Kolboe, S., 125
Kolchin, E. K., 119
Kolor, M. G., 361
Kolos, W., 121, 124
Komarov, V. S., 461
Komers, R., 357
Kon, H., 385
Konada, T., 451
Konouck, B. C., 484
Kooyman, E. C., 65, 68
Kopecky, K. R., 78
Kopelmann, R., 143
Kopple, K. D., 144
Kopylev, B. A., 322
Korbut, V. M., 181
Kornienko, L. S., 372
Korolev, A. Ya., 457
Korshunov, B. G., 8
Kortolenko, L. A., 28
Koryta, J., 309, 310
Koski, W. S., 89, 369
Koskikallio, J., 322, 327
Kosobutskaya, L. M., 505
Kosower, E. M., 140
Kostrikin, V. M., 327
Kostryukov, V. N., 5, 6
Kotaka, T., 492
Kotlensky, V., 94
Kotov, E. I., 144, 469
Koutecký, J., 310
Kovacs, I., 136
Kovalev, I. F., 339
Kovaleva, N. V., 454
Kovaszny, L., 394
Kovats, E., 358
Kovitz, A. A., 393
Kovner, M. A., 339, 343
Kovneristaya, A. S., 28
Kowkabany, G. N., 362
Koyama, R., 482, 483, 484
Kozlenko, F. N., 30
Kozłowski, Z., 5
Krainov, E. N., 339
Kral, H., 466
Kramer, W. R., 7, 10, 11
Krasil'nikov, K. G., 457, 459, 468
Krasnitski, A. Ya., 296
Krasnovsky, A. A., 504, 505
Krasovskaya, T. A., 524
Kratky, O., 480
Kraus, C. A., 21, 22, 25, 29, 34, 35, 37
Kraus, G., 180
Kraus, J. W., 49
Krause, A., 468
Krause, S., 485
Krauss, M., 122
Krebs, H., 315
Kreevoy, M. M., 65
Krejci, M., 354
Kresge, A. J.,320, 327
Krestovnikov, A. N., 5
Kretchmer, C. B., 441
Krevelen, D. W. van, 351
Krieger, F. J., 397
Krieger, I. M., 493
Krieger, T. J., 164
Kriegl, H. J., see Janeschitz-Kriegl, H.
Krigbaum, W. R., 482, 485, 489, 490, 493, 496
Krippahl, G., 506, 512, 522
Krisement, O., 117
Krishnamurty, K. V., 324
Krcepelin, H., 3, 4, 5, 7
Krog, U., 316
Kröger, C., 278
Krogmann, D. W., 513, 515, 517
Kromhout, R., 511
Kronenberg, G. H. M., 521
Krongelb, S., 383
Krotkov, G., 363
Krug, J., 395
Kruissink, C. A., 489
Kruyer, S., 456, 458
Kubo, R., 159, 208, 262
Kuchai, S. A., 452
Kudryavtseva, T. A., 320
Kudva, O. K., 32
Kuehner, H. H., 439
Kuelemans, A. I. M., 449, 450
Kuffer, F., 100
Kugler, E., 28, 32, 358
Kuhlmann-Wilsdorf, D., 410
Kuhn, H., 124, 125
Kuhn, S. J., 74
Kuliev, A. A., 4, 409
Kumagai, S., 392, 398
Kunisawa, R., 523
Kunitake, G. M., 522
Kuppermann, A., 94, 95, 96, 124
Kuprianov, S. E., 90
Kurata, M., 478, 490, 492
Kurbatov, B. L., 89, 137
Kurien, K. C., 97
Kurilenko, O. D., 456
Kursanov, D. N., 82
Kurti, N., 375
Kurzbach, E., 327
Kusch, P., 5, 8, 290
Küster, W. J. S., see Schmidt-Küster, W. J.
Kusumoto, H., 382
Kutschke, K. O., 5, 47, 49, 56
Kutzyak, Yu. Ya., 136
Kuwata, K., 383, 467
Kuznetsov, V. D., 180
Kwan, T., 460
Kwantes, A., 354
Kyle, B. G., 434

L

Labhart, H., 144
Laber, G., 74
LaBudde, C. D., 123
Lacam, A., 4, 5, 6
Lacher, J. R., 80
Lacina, J. L., 3, 6, 7, 12
Lacmann, R., 453
Ladenheim, H., 327
Lafontaine, J., 155
Lagerquist, A., 135, 136
Laidler, K. J., 41, 42, 60, 323, 327, 456
Laitinen, H. A., 288, 289, 292
Laity, R. W., 283, 284, 291
Lake, J. S., 137
Lamb, H. J., 421
Lamb, J., 315
Lamb, R. C., 67
Lambe, J., 372
Lambert, J. D., 429
LaMer, V. K., 178, 179
Lamm, O., 314, 315
Lampe, F. W., 51, 90, 91, 93
Landau, L., 170
Landel, R. F., 161
Lander, J. J., 421
Landesman, H., 378
Landon, G. J., 293
Landowne, R. A., 357
Lane, C. T., 4
Lane, T. J., 339
Lang, A. R., 413
Lang, H. M., 513, 524
Langemann, A., 78
Langenbeck, W., 65
Langer, S. H., 357
Langford, C. H., 27
Langin, P., 144
Langmuir, I., 436
Langseth, A., 342
Lapitskii, A. V., 319
Lapp, C., 479
Lapteva, F. S., 319
Larsen, D. W., 69
Larsson, L., 322

Lasater, J. A., 454
Lasher, G. J., 373
Lassettre, E. N., 87
Latimer, P., 504, 505
Latout, M., 485
Latysheva, V. A., 8
Laudise, R. A., 421
Lauer, W. M., 143
Laurent, J. F., 409
Laurin, R. V., see Vaglio-Laurin, R.
Laurita, W. G., 369
Lauritzen, J. I., 165
Lautsch, W. F., 7
Lavorel, J., 505
Law, J. T., 463
Lawrence, A. S. C., 177
Lawrence, S. D., 429
Lawson, A. W., 154, 268
Lawson, G. J., 362
Lawson, W. D.,
Lawton, B. E., 458
Lawton, E. J., 102, 103
Lax, M., 164
Layzer, D., 120
Lazarev, A. I., 4, 5
Leach, S., 137, 138
Leadbetter, A. J., 4, 5
Leal, G., 73
Leane, J. B., 380
Learner, R. C. M., 136
Leary, J. A., 444
Lebbe, J., 359
Lebedev, R. S., 339
LeBlanc, F., 135, 137, 138
Lebowitz, J., 246, 249
Lebowitz, J. L., 154, 196, 197, 203
Lecocq, A., 4
Ledbed, D. V., 4, 5
Lederer, E., 363
Lederer, M., 361, 362, 363
Leduc, P., 322
Ledwith, A., 82
Lee, C. H., 409
Lee, E. H., 351, 356
Lee, H. T., 497
Lee, J., 135, 378
Lee, W. H., 27, 322
Lees, L., 396
Lefèbvre, R., 122
LeFèvre, R. J. W., 149
Lefort, M., 97, 98
Legallais, V., 308
Leggett, R. D., 421
Le Grivès, E., 394
Leibfried, G., 416
Leja, J., 180
Leland, T. W., 440
Lemmon, R. M., 376
LeMoal, H., 361
Lemons, J. F., 313
Lennard, A., 77
Lenoir, J., 469
Lentei, I. T., see Tamássy-Lentei, I.
Leont'ev, V. B., 31
Leray, J., 495
Lester, G. R., 351
Lester, R. L., 514
Letort, M., 326
Leun, A. A. J. van der, 519
Levelt, J. M. H., 4
Levich, V. G., 310
Levine, L., 511
Levine, S., 2
Levitt, L. S., 326, 509
Levy, E. M., 451
Levy, H. A., 296, 297
Levy, J. B., 398
Lewis, B., 392, 393, 395, 400
Lewis, C. M., 506
Lewis, E. S., 65, 71
Lewis, H. R., 372
Lewis, H. W., 120
Lewis, I. C., 65, 70, 71, 327
Lewis, J., 34
Lewis, J. E., 435
Lewis, J. T., 109
Li, C. H., 419
Li, M., 5
Lichtin, N. N., 101
Lidiard, A. B., 411
Liehr, A. D., 125
Lien, A. P., 65, 72
Lien, W. H., 4
Lifson, S., 479
Lighthill, M. J., 397
Likhtman, V. I., 181
Liley, P. E., 5
Lilich, L. S., 8
Lin, C. C., 10, 11
Lind, J. E., Jr., 22
Linder, B., 124
Linderberg, J., 116
Lindholm, E., 285
Lindquist, R. H., 33
Lindqvist, C., 316
Linnenbom, V. J., 94
Linnett, J. W., 111, 123, 336, 338, 339, 340, 341, 393, 396
Linschitz, H., 317
Linton, H. R., 339
Lippincot, B. B., 507
Lippmann, D. Z., 429
Lipscomb, W. N., 33
Lipsky, S. R., 357
Litovitz, T. A., 315
Littlewood, A. B., 350, 352
Litvinenko, L. M., 327
Liu, C. H., 288, 289, 292
Liu, I. D., 135
Livingston, H. K., 450
Livingston, R., 74, 101, 102, 317, 383, 501, 504, 520
Ljunggren, S., 314, 315
Llewellyn, D. R., 77, 319, 320
Llopis, J., 174
Lloyd, D. G., 99
Lock, J. M., 5
Lodding, A., 285
Loebl, E. M., 327
Loewenstein, A., 312, 313, 321
Lofgren, L., 4
Logan, M. J., 421
Logan, R. A., 409
Loinger, A., 189
Lombardi, E., 376
Lomer, J. N., 414
Lomov, A. L., 292
Long, D. A., 339, 343
Long, F. A., 76, 88, 318, 321, 322
Long, L. H., 7
Long, R. A. J., 65
Longuet-Higgins, H. C., 124, 125, 240
Longwell, J. P., 400
Longworth, W. R., 29
Looney, C. E., 140
Lorell, J., 392, 393, 398
Lorenz, R., 276
Lorenz, M. R., 284
Los, J. M., 310, 321
Losev, S. A., 56
Lossing, F. P., 52, 53, 60, 89, 90
Lothian, G. F., 145
Loucheux, C. L., 480
Louck, J. D., 114
Louwerse, P., 4
Louwrier, K. P., 510, 519
Love, P., 65
Lovell, L. C., 414
Low, M. J. D., 464
Löwdin, P. O., 107-32; 108, 109, 110, 113, 114, 115, 116, 117, 118, 119, 120, 121, 124
Lowry, C. D., 348
Lu, B. Y. C., 442
Lübbers, D., 309
Lucchesi, P. J., 93
Luck, S. M., 27
Lucken, E. A. C., 370
Ludkovskaya, B. G., 94
Ludwig, G. W., 373
Luetic, P., 467
Luetz, F., 413
Lukomskii, Yu. Ya., 4
Lumry, R., 317, 501, 504, 505, 506, 509, 511, 513, 514, 515, 516, 520, 521
Lundberg, J. L., 494
Lundén, A., 285, 286
Lundgren, G., 444
Lundquist, S. O., 5
Lupton, J. M., 151
Lushnaya, N. P., 276
Lutskii, A. E., 6
Lutz, E., 138
Luz, Z., 32, 313, 378

Luzzati, V., 176, 179
Lwowski, W., 78
Lygin, V. I., 468
Lygina, I. A., 457
Lynch, R. T., 421
Lynch, V. H., 514
Lyons, L. E., 143
Lyons, V. J., 8
Lyuboshits, N. Yu., 7

M

McBeth, R. L., 295
McCabe, L. J., 383
McCall, D. W., 384, 385
McCarty, M., 138
McCaulay, D. A., 65, 72
McClean, J. D., 510
McClellan, A. L., 142
McClure, D. S., 133, 134, 143
McClure, F. T., 400
McClure, G. R., 376
Maccoll, A., 55
McCollum, J. D., 90
McCollum, R. L., 416
McConnell, H. M., 34, 312, 372, 380, 381
McCormick, H. W., 495
McCoubrey, J. C., 428
McCoy, L. L., 69
McCullough, J. P., 1-20; 6, 7, 9, 11, 12
McDermot, H. L., 458
McDonald, C. C., 59
McDonald, H. J., 360
McDonald, H. O., 319
McDonald, R. A., 6, 7, 10, 11
McDowell, C. A., 89, 383
McDowell, J. R., 59
McDowell, W. J., 37
McDuffie, H. F., 327
Macek, K., 362
McElvain, S. M., 82
McGarvey, B. R., 378
McGee, H. A., Jr., 454
McGinnis, L. P., 291
McGlashan, M. L., 7, 427
McGregor, W. R., 34, 35
Machlup, S., 207
McIntosh, R., 459
McIntyre, D., 484
MacIver, D. S., 359
MacKay, J. W., 416
McKean, D. C., 339, 342
McKellar, J. R., 324
McKendall, L. V., 360
MacKenzie, J. D., 277, 421
McKeown, J. J., 4, 5
McKetta, J. J., 6, 443
McKim, F. R., 6
McKinney, P. C., 124
McKinney, W. P., 442
Mackle, H., 7, 12
McLachlan, A. D., 383
McLafferty, F. W., 90
McLaughlin, E., 431, 440
McLaughlin, R. L., 439
Maclay, H. K., 508
Macleod, A. C., 152, 456
McMillan, W. G., 449-76; 456
MacNairn, J., 418
McNesby, J. R., 46, 52
McRae, E. G., 134
McWeeny, R., 113, 114
MacWood, G. E., 4, 441
Maddin, R., 409, 410
Madeley, J. D., 469
Maehhout-van der Vorst, W., 411
Maevskaya, A. N., 524
Maeyer, L. de, 165
Magat, M., 100, 162, 485
Magee, J. L., 87, 92, 95, 96, 97
Magnus, M., 326
Magritte, H., 348
Mah, A. D., 3, 4, 5, 8, 10
Mahan, B. H., 43
Mahieu, A. M., 45
Maier, W., 315
Mailey, R. D., 276
Maisch, W. G., 124
Major, H. M., 494
Majthényi, L., 28, 32
Majumdar, S. D., 114
Maki, G., 429
Makin, M. J., 416
Makovky, A., 56
Malden, P. J., 450
Malinowski, E. R., 326
Malkin, V. I., 285
Malkovich, R. S., 409
Mallett, M. W., 418
Malloy, J. J., 280
Malm, J. G., 4
Malmberg, C. G., 155
Manchester, F. D., 3, 4, 5
Mandel, G., 250, 258
Mandel, M., 157, 162
Mandelkern, L., 488
Mandell, 376, 378
Manenc, J., 444
Mangum, B. W., 139
Manley, O. P., 265, 266
Mann, R. S., 6
Mannella, G., 46
Manno, P. J., 93
Mansfield, W. W., 179
Marble, F. E., 393, 400
March, N. H., 109, 114, 120
Marchal, J., 479
Marcus, E., 65, 143
Marcus, P. M., 5
Marcus, R. A., 54, 323
Marcus, R. J., 323, 504, 514
Mare, P. B. D. de la, 65, 77
Margerum, D. W., 318
Margerum, J. D., 58
Margrave, J. L., 3, 5, 135
Marion, G. W., see Watelle-Marion, G.
Mark, H., 496
Markin, B. I., 4, 7
Markina, T. T., 327
Markov, B. F., 291
Markovitz, H., 482, 492
Markowitz, M. M., 5
Markstein, G. H., 395
Marmayan, G. A., 327
Maron, S. H., 486, 492, 493
Marquisee, J., 317
Marrè, E., 513, 518
Marsden, D. G., 396
Marsh, J. D. F., 450
Marsh, R. F., 358
Márta, F., 43
Marte, J. E., 397
Martens, G., 45
Martin, A. J., 358
Martin, A. J. P., 349, 350, 361
Martin, D. G., 416
Martin, D. L., 3, 5
Martin, D. S., 318, 325
Martin, G., 376
Martin, H., 327
Martin, J. F., 7
Martin, J. J., 7
Martin, M., 376, 377
Martin, P. C., 375
Martin, R. B., 319
Martin, R. T., 455
Martinez, F. W., Jr., 358
Maryott, A. A., 152, 154, 155, 156, 158
Mashiko, T., 380
Mashiko, Y., 6
Mashovets, V. P., 291
Masiá, A. P., 5, 7
Maslov, P. G., 7
Maslov, Yu. P., 7
Mason, E. A., 124
Mason, H. S., 309, 525
Mason, S. F., 141
Mason, S. G., 489
Mastrangelo, S. V. R., 442
Mate, C. F., 4
Mateos, J. L., 78
Mathesen, H., 7
Matheson, M., 98
Matheson, M. S., 101
Matheson, R. A., 37
Matijevic, E., 170, 171
Matsen, F. A., 117, 120, 122, 123, 125
Matsuda, A., 464
Matsuki, Y., 380
Matsunaga, Y., 383
Matsuoka, S., 378
Matsushima, S., 119
Matterson, A. H. S., 343
Matthies, P., 308

Matyska, B., 310
Mavel, G., 377
Maximon, L. C., 189
Mayahi, M. F., 68
Mayer, E., 392, 394, 399
Mayer, J. E., 114, 199
Mayers, S. W., 292
Mayne, B., 317
Mayne, B. C., 501-30; 505, 516
Mayot, M., 121
Mazumder, B. R., 458
Mazur, P., 150, 151, 157
Meador, W. E., Jr., 123
Meakins, R. J., 158, 160, 162, 164, 165, 166
Meal, J. H., 336
Mecke, R., Jr., 155
Medcalf, W. E., 421
Meder, W., 98, 101
Medvedev, V. A., 5
Meek, E. S., 504, 510
Meeks, F. R., 429
Melboom, S., 32, 312, 313, 321, 378
Meier, F., 413
Meier, W. M., 421
Meijering, J. L., 419
Meise, W., 327
Meislich, H., 71
Meister, A. G., 337, 339
Meixner, J., 314
Melanson, B. E., 46
Mellado, G. L., 355
Mellors, G. W., 282, 291, 292, 293
Melton, C. E., 89, 90, 92
Mêneret, J., 5
Menes, M., 374
Meniga, A., 362
Menzies, I. A., 292
Mercer, E. H., 175
Mercer, F. V., 510
Mercer, P. D., 45
Merrifield, R. E., 140
Merrill, E. W., 492
Merz, K. M., 421
Meschi, D. J., 8
Meshitsuka, G., 99
Messerly, J. F., 6, 7, 11
Messing, M. F., 318
Mestres, R., 349
Metcalfe, L. D., 361
Meyer, G., 4, 8
Meyer, H., 6, 7
Meyer, R. E., 257
Meyerhoff, G., 489, 490
Meyerson, S., 90
Meyrick, G., 413
Meys, H., 485
M'Hirsi, A., 4, 5, 6
Michel, A., 136
Michel, K. W., 53
Michel, M., 485
Michels, A., 4, 153
Midtdal, J., 119
Miescher, E., 135
Migazawa, T., 339
Mignolet, J. C. P., 462
Mikhail, S., 32
Mikhailov, B. M., 93
Mikhailov, G. P., 162
Mikhalyuk, R. V., 456
Milburn, R. M., 326
Millán, G., 393, 393
Miller, C. E., Jr., 94
Miller, D. J., 27
Miller, F. J., 285
Miller, G., 339, 343
Miller, G. H., 47, 48
Miller, H. C., 378
Miller, J., 120, 122, 123
Miller, J. A., 523
Miller, J. G., 327
Miller, N., 98
Miller, R. C., 159, 163
Miller, R. G., 5, 8
Miller, R. P., 362
Miller, R. R., 7
Miller, S. I., 70
Miller, W. T., 82
Mills, I. M., 335, 340, 341, 343
Milman, M., 417
Milne, T. A., 5, 8
Milner, D. C., 343
Mina, P., 181
Minassiam-Saraga, L. T., see Ter Minassiam-Saraga, L.
Minematsu, M., 370
Minter, F. J., 416
Minton, R. G., 65
Misch, R. D., 418
Mishchenko, K. P., 327
Misra, T. N., 143
Miss, A., 362
Mita, I., 100
Miyagawa, O., 381
Miyahara, K., 460
Mizetskaya, I. B., 421
Mizuno, Y., 124, 125
Mizushima, M., 122
Mizushima, S., 339
Mizushima, Y., 463
Modena, I., 384
Moeller, T., 29
Moelwyn-Hughes, E. A., 322
Moesta, H., 449
Moffitt, W., 383
Moghe, V. A., 178
Mokhov, Iu. N., 40
Moldenhauer, J. C., 145
Molinari, E., 46
Mollwo, E., 282, 294
Monatelli, G., 289
Monse, E. U., 285
Montarnal, R., 100
Montgomery, R. L., 3, 4, 5, 10
Montmory, R., 453
Montroll, E. W., 188, 392
Moodie, R. B., 380
Moore, B., 34
Moore, G. E., 417
Moore, R. T., 3, 6
Moore, T. B., 361
Moore, W. J., 409
Moore, W. R., 65, 490
Moraglio, G., 496
Moran, P. R., 414
Moraw, R., 316, 317
Morawetz, H., 327
Moreland, D. E., 515
Morelock, C. R., 422
Morgan, L. O., 313, 317, 385
Mori, H., 213, 262, 263
Morigaki, K., 372, 383
Mörikofer, A., 80
Morin, F. J., 38
Morino, Y., 370
Morlin, Z., 453
Morokuma, K., 125
Morozov, I. S., 5, 8
Morozova, M. P., 5
Morrell, V. E., 395
Morris, D. M., 429
Morris, G. C., 143
Morris, M. L., 318
Morrison, J. A., 4, 5
Morrison, J. D., 88, 137
Morrison, J. L., 457
Mortimer, C. T., 7
Mortimer, D. C., 522
Mortimer, F. S., 378, 381
Moscatelli, E. A., 356
Moscowitz, S., 370
Moser, C., 122
Moses, V., 519, 523, 524
Moss, L. K., 504
Moss, M., 414
Mott, N. F., 418
Moulton, W. G., 371
Mousseron, M., 322
Muccini, G. A., 92
Mudd, J. B., 516
Mueller, C. R., 435
Mueller, E., 409
Muetterties, E. L., 378
Muic, N., 362
Mukerjee, P., 182
Mukherjee, L. M., 443
Mukherjee, S. K., 326
Mulcahy, M. F. R., 283
Muller, A., 456
Müller, A., 316, 317
Müller, E., 444
Muller, N., 376, 381
Mulley, J. W., 165
Mulligan, J. F., 117
Mulliken, R. S., 65, 122, 123, 126, 134, 335
Mullins, B. P., 393, 394, 395, 400
Mumma, R. O., 376
Muñoz, R., 122

Münster, A., 483
Münze, R., 6
Murad, E., 49, 57, 58
Murai, S., 355
Murakami, Y., 459
Murata, H., 339, 340
Murator, F. S., 4, 5, 9
Murayama, T., 310, 321
Murbach, E. W., 4, 8
Murgai, M. P., 394
Murgulescu, I. G., 327
Murphy, J., 385
Murphy, R. B., 65
Mustacchi, H., 176, 179
Mustajoki, A., 5
Muttik, G. G., 468
Myasnikov, I. A., 464
Myers, J., 506
Myers, O. E., 313
Mysels, K. J., 179, 182
Myuller, R. L., 327

N

Nabe, D. R., 327
Nachbar, W., 391, 398, 400
Nachmansohn, D., 170
Nachtrieb, N. H., 257, 266, 267, 268, 276, 407
Nadeau, J., 414
Nagahara, S., 124
Nagai, K., 479
Nagarjunan, T. S., 457
Nagata, C., 125
Nagaura, S., 287
Nair, P. M., 65, 125
Nakagaki, M., 360, 495
Nakagawa, I., 339
Nakahara, O., 370
Nakai, Y., 412, 467
Nakajima, N., 493
Nakajima, S., 262
Nakamura, J., 395
Nakata, T., 464
Nakayama, T., 137
Nantiki, M., 207
Nanis, L., 171, 172
Narasimhan, P. T., 377, 380
Narita, S., 339
Nash, T., 182
Nasledov, D. N., 421
Naumann, A. W., 5
Naumova, S. F., 9
Navoselova, A. V., 4, 5
Nazarian, G. M., 488
Neckel, A., 9, 10
Neill, W. K., 327
Neilson, E. F., 4, 5, 438
Nelson, R. A., 5, 12
Nelson, R. C., 508
Nelson, R. L., 45
Nesbet, R. K., 116, 119
Nesmeyanov, A. N., 4, 5
Neumann, H. M., 324
Neumann, K. K., 3, 4, 5, 7
Nevitt, T. D., 100
Newkirk, J. B., 413
Newman, E. S., 5
Newman, R. B., 433
Newman, R. H., 408
Newman, S., 496
Newton, A. S., 4
Newton, G. A., 511
Newton, J. W., 511, 518
Newton, R. F., 292, 298
Newton, T. W., 324, 325
Niblett, P. D., 4
Nicholas, J. F., 43
Nicholls, J. A., 394
Nichols, R. W., 136
Nicholson, A. J. C., 88
Nicholson, H. M., 400
Nicklas, J. P., 120
Niclause, M., 326
Nicolou, C. S., 383
Nielsen, J., 421
Nielsen, J. R., 6
Nielsen, M. L., 8
Nielsen, R. L., 440
Nielsen, W. D., 78
Niemann, H., 443
Niesel, W., 309
Nihei, T., 523
Nijboer, B. R. A., 150
Nikitin, E. E., 43
Nikitin, V. A., 469
Nikolaev, K. M., 456
Nikolaev, L. A., 327
Nikol'skaya, A. V., 292
Nisbet, A., 327
Nishanov, D., 319
Nishida, K., 519
Nishimura, J., 421
Nishimura, S., 380
Niwinska, T., 486
Nixon, E. R., 339
Noble, A. W., 385
Noble, G. A., 374
Noe, F. F., 376
Nogare, S. D., see Dal Nogare, S.
Noll, W., 492
Nolle, A. W., 313, 317
Norberg, R. C., 507
Norris, T. H., 319, 320
Norrish, R. G. W., 56, 59, 133, 136, 141
North, A. M., 65
Noury, A., 4, 5, 6
Nováková, J., 450
Novikov, G. I., 4, 8
Novikov, I. I., 4, 5
Novoselova, A. V., 4, 5, 9
Novozhilova, L. I., 409
Noyce, D. S., 80
Noyes, R. M., 311
Noyes, W. A., Jr., 54, 55, 57, 58, 98
Nozieres, P., 416
Nuboer, J. F. W., 516
Nugent, R. G., 398
Nürnberg, H. W., 310
Nutting, J., 413
Nyberg, J., 326

O

Ochoa, S., 522
Odajima, A., 455
Oderholm, B. J., 137
O'Dwyer, J. J., 158, 159
O'Dwyer, M. F., 339, 340
Offergeld, G., 162
Ogata, Y., 326
Ogawa, M., 134, 137
Ogawa, S., 372
Ogg, R. A., 33
Ogg, R. A., Jr., 4, 6, 8, 9
Ogilvie, G. J., 467
Ogilvie, R. E., 408
Ohkoshi, S., 460
Öhrn, O. E., 493
Oka, S., 310, 321
Okabe, H., 59
Okamura, S., 103
O'Keefe, J. G., 374
O'Konski, C. T., 162, 370
Oksengorn, B., 142
Olah, G. A., 74
Oldekop, W., 278
Oldenberg, O., 134
Oldershaw, G. A., 59, 136
Olson, A. R., 122
Olson, J. M., 521
O'Mara, J. H., 484
Omerod, E. C., 356
Onak, T. P., 378
Oncley, J. L., 153, 154, 160, 162
Onishi, Y., 450
Ono, S., 297
Onsager, L., 21, 22, 28, 155, 165, 196, 207
Onyon, P. F., 494
Ooi, T., 487
Ooshika, Y., 125
Oosterhoff, L. J., 125
Oosterom, J. F., 4, 8
Opel, G., 394
Opik, U., 337
Oppenheim, A. K., 394
Oranskaya, M. A., 4
Orchin, M., 82
Orgel, L. E., 385
Oriani, R. A., 163
Orlova, I. V., 5
Ormand, F. T., 122
Orofino, T. A., 478, 483, 484
Orr, C., Jr., 449
Orr, V., 442
Orton, J. W., 372
Orville-Thomas, W. J., 337
Ory, R. L., 362
Osagawa, K., 360
Osborn, J. R., 399
Osborne, D. W., 4

Osburn, K. R., 59
Oster, G., 158
Oster, H., 359
Osterheld, R. K., 322
Osteryoung, R., 292
Osteryoung, R. A., 288
Ostrovskii, V. S., 181
Osuch, G., 277
Otaki, T., 466, 467
Ott, J. B., 440
Ottenstein, D. M., 356
Oubridge, J. V., 29
Oudemans, G. J., 153
Ouellet, L., 322
Overall, D. W., 383
Overbeek, J. T. G., 170, 173
Overend, J., 339
Overhauser, A. W., 411
Owens, B., 283, 284

P

Pace, E. L., 460
Pachucki, C. F., 89
Paddock, N. L., 125
Padgett, A. A., 122
Págo, L., 441
Pahor, J., 6, 7
Paillous, J. K., see Kahane-Paillous, J.
Pake, G. E., 383
Palit, S. R., 178
Palkin, V. A., 4, 5
Palmer, A. R., 293
Palmer, J., 313, 318
Pals, D. T. F., 489
Panchenko, I. D., 289, 291
Panish, M. B., 292
Pankey, J. W., 292
Pannetier, G., 136
Panova, A. N., 6
Pao, Y.-H., 491
Paolini, L., 142
Papadopoulos, M. N., 438
Pape, M., 98, 101
Papêe, H. M., 456, 457
Papoušĕk, D., 441
Papoušĕk, Z., 441
Pariaud, J. C., 45
Paridon, L. J., 441
Park, J. D., 80
Park, R. B., 510, 513, 519
Parker, A. J., 327
Parker, C. A., 325
Parker, R. E., 327
Parker, W. E., 65
Parks, J. M., 123
Parlin, R. B., 43
Parmenter, R. H., 108
Parr, R. G., 121, 123, 337, 397
Parravano, G., 464
Parton, H. V., 37
Pashinkin, A. S., 4, 5
Pashley, D. W., 413, 421
Passonneau, J. V., 507
Pasternak, R. A., 488
Pastor, R. C., 33, 372
Patai, S., 327
Patat, F., 488
Patel, R. D., 486
Patnaik, D. J., 28
Patrick, C. R., 3, 10, 60
Patterson, A., 313
Patterson, D. A., 412
Pauncz, R., 114, 125
Pauson, P. L., 376
Paxton, H. W., 421
Payens, T. A. J., 171, 175
Payette, G., 125
Payne, K. G., 395
Pchelkin, V. A., 319
Peake, J. S., 294
Peaker, F. W., 496
Pearlman, N., 5
Pearson, N., 11
Pearson, R. B., 72, 77
Pearson, R. G., 313, 317, 318
Pedley, J. B., 7, 9
Peek, H. M., 394
Pekeris, C. L., 119
Pelletier, S., 31
Peña, M. D., 5, 7
Penner, S. S., 391-406; 391, 392, 393, 394, 395, 397, 398, 399, 400
Penning, P., 408
Pennington, R. E., 6, 11
Perel, V. I., 114
Pergiel, F. Y., 5, 12
Peri, J. B., 176
Perkampus, H. H., 144
Perkins, R. H., 319
Perruche, C. R., see Rousson-Perruche, C.
Perry, E. J., 453
Perry, J. F. L., 155
Perry, R., 308
Pershan, P. S., 383
Pertel, R., 59
Pertsov, N. V., 181
Pesic, D., 136
Pesteil, P., 143
Peter, M., 372
Peterlin, A., 480, 490, 492, 495
Peters, A. J., 409
Peters, D. G., 327
Petersen, D. E., 429
Petersen, R., 375
Petersen, R. C., 76
Peterson, D. L., 454
Peterson, D. T., 8
Peterson, H. J., 81
Peterson, N. L., 408
Pethica, B. A., 170, 171
Petit, G., 5, 275
Petrauskas, A. A., 10, 315
Petro, A. J., 160
Petrova, G. L., 327
Petrucci, R. H., 465
Petrucci, S., 24, 25, 36
Pettit, R., 73
Peyron, A., 322
Peyron, M., 94, 134
Pfeffer, W., 4
Philippoff, W., 492
Philippu, A. J., 362
Phillips, C. S. G., 154, 348, 349, 358
Phillips, J. C., 5
Phillips, N. E., 3, 4, 5
Phillips, W. D., 140, 378
Pickering, H. L., 465, 466
Pickering, R. A., 9, 10
Pickett, J., 418
Pickett, L. W., 137
Pidgeon, L. M., 4, 8
Pierce, P. E., 492
Pierotti, C. J., 438, 439
Pierotti, R. A., 453, 456, 458
Piesbergen, U., 4
Pietsch, H., 325
Piette, L. H., 312, 383, 416
Pike, F. P., 5, 442
Pilsäter, V., 135
Pimentel, G. C., 142
Pines, D., 416
Pines, P. Ya., 408
Pinner, S. H., 103
Piontelli, R., 289, 292
Piotrowski, W., 30
Pistorius, C. W. F. T., 339, 340
Pitkanen, P. H., 236
Pitkethly, R. C., 359, 360
Pitt, D. H., 160
Pitts, J. N., Jr., 58
Pitzer, K. S., 3, 5, 6, 10, 11, 43, 261, 262, 429
Pivovarov, V. M., 343
Pizzella, L., 264
Place, M. A., 489
Plane, R. A., 319
Plank, C. A., 442
Planta, C. van, 376
Platas, O., 122
Platt, J. R., 125, 126, 134, 521
Platzman, R. L., 95
Plesch, P. H., 29
Plesset, M. S., 351
Pletenev, A., 289
Plooster, M. N., 3, 6
Pneuli, D., 6
Pobitschka, E., 383
Pocker, G., 327
Pogodaev, A. K., 452
Poincaré, H., 188
Poirier, J. C., 22
Pojak, Z., 378
Polak, L. S., 99
Polanyi, J. C., 53, 54

Poley, J. P., 163
Pollard, F. H., 348, 349, 354
Pollock, B. D., 4
Polo, S. R., 336
Polowinski, S., 486
Pon, N. G., 508, 510, 513, 519
Poole, C. P., 383
Poole, H. G., 145
Pope, D. F. D., 372
Pople, J. A., 151, 154, 158, 240
Popov, A. I., 27, 29
Popova, I. A., 31
Porbansky, E. M., 421
Porod, G., 480
Porter, B., 291
Porter, G., 44, 101, 133, 138, 139, 316, 317
Porter, G. B., 59
Porter, J. W., 523
Porter, R. F., 8, 11
Porter, R. P., 58
Porterfield, W. W., 372
Portis, A. M., 375
Poshkus, D. P., 457
Potter, D. J. B., 7
Potter, R. L., 3, 4, 394
Pottie, R. F., 91
Potts, W. J., 339
Poulet, H., 143
Poulis, N. J., 375
Poulson, R. E., 313, 317, 378
Pound, G. M., 277
Pound, R. V., 193, 370
Powell, D. B., 376
Powell, J. L., 136
Powell, R. E., 43
Powell, R. S., 102, 103
Powers, R. W., 409, 419
Powles, J. G., 159, 164
Pozin, M. E., 322
Pradel, A. F. de, 467
Praklarova, V. M., 409
Pratt, N. H., 77
Prausnitz, J. M., 428, 429
Predvoditelev, A. S., 4
Preston, S. T., 348
Preston, S. T., Jr., 355
Preston-Thomas, H., 5
Preuss, H., 111, 121, 124
Price, A. R., 440
Price, C. C., 9, 10
Price, D. R. W., 137
Price, E. W., 400
Price, W. C., 133-48; 133, 137, 140
Priem, R. J., 392, 399
Priest, H. F., 8
Prigogine, I., 196, 225, 226, 227, 236, 261, 268
Primak, W., 416
Prince, D. L., 360
Prince, L. M., 177, 178
Prince, R. H., 308, 322
Prinzbach, H., 82
Priselkov, Yu. A., 5
Pritchard, D. E., 381
Pritchard, G. O., 48
Pritchard, H. O., 44, 45, 48, 119, 122, 341
Pritchard, J., 462
Pritchard, J. G., 77, 321
Probstein, R. F., 396
Prochazka, Z., 361
Proctor, W. G., 383, 384
Prokhorov, A. M., 372
Prosen, E. J., 5, 8, 12, 395
Protaschik, V. A., 451
Protheroe, J. B., 57
Protsenko, P. I., 281
Provotorov, B. N., 43
Prue, J. E., 25
Prusakov, P. G., 4
Prusikova, M., 362
Pryor, W. A., 326
Paheghetskii, S. Y., 94
Ptitsyn, O. B., 479, 480, 483, 490
Pugh, A. C., 317, 504, 520
Pugsley, F. A., 277
Pullman, A., 125
Pullman, B., 125
Pultz, W. W., 456
Punnett, T., 513
Purbrick, R. L., 136
Purcell, E. M., 193
Purnell, J. H., 348, 350 351, 352, 359
Puttey, E. H., 421
Puttick, K. E., 413
Pyfrom, H. T., 512
Pyke, B. H., 354

Q

Quagliano, J. V., 339

R

Rabideau, S. W., 324, 325
Rabinovitch, B. S., 49, 53
Rabinowicz, J., 396
Rabinowitch, E., 317, 324, 501, 504, 505, 507, 511, 515, 521
Radushkevich, L. V., 451
Raffel, H., 240, 250, 251
Ragle, J. L., 369
Raman, N. K., 497
Ramán, U. D., 7
Ramanathan, K. G., 3, 4
Rambel, K. E., 398
Rampolla, R. W., 163
Ramsay, D. A., 133, 138
Ramsden, E. N., 311
Ramsey, J. B., 37
Ramsey, N. F., 193
Ramsperger, H. C., 41
Randall, J. J., 75
Randall, J. L., 371
Randles, J. E. B., 289
Ransil, B. J., 122, 123
Rao, K. S., 136
Rao, P. T., 135
Rao, V. S., 8, 290
Rao, V. V., 135
Rapoport, H., 80
Rasskazov, D. S., 4, 5
Rastogi, R. P., 299
Rautian, S. G., 343
Ravich, G. B., 6
Ray, J. D., 4, 6, 8, 9
Ray, N. H., 348
Raynes, W. T., 145
Reamer, H. H., 440, 443, 444
Reddy, G. S., 376
Rédei, L., 117, 119
Redfield, A. G., 375
Redies, M. F., 143
Redlich, O., 342, 427, 438, 439, 442, 454
Ree, T., 297, 312, 492
Reed, C. P., 443
Reed, R. E., 421
Reed, R. I., 90
Reed, T. B., 3, 6
Reed, T. M., III, 428, 430, 434, 436, 437
Reed, W. L., 80
Reeds, J. N., 461
Rees, L. V. C., 454
Reese, R. M., 7, 11, 89
Reeves, C. G., 6
Reeves, L. W., 377
Reeves, R. R., 46
Rehage, G., 485
Rehbiner, P. A., 180, 181
Reich, H. A., 384
Reid, R. C., 10
Reimer, K. G., 325
Rein, R., 319
Reinisch, L., 162
Reinosa, J., 326
Reishus, J. W., 318
Reiss, H., 38, 407, 419
Rempel, R. C., 372, 383, 416
Reshetnikova, L. P., 4, 5, 9
Resing, H., 267, 407
Resnick, A. L., 497
Revazyan, A. A., 291
Rexroad, H. N., 383
Reyerson, L. H., 457
Reynolds, D. C., 421
Reynolds, G. F., 378
Rezukhina, T. N., 4, 5

Rhodes, D. C., 296
Rhodes, E., 140, 144
Ribeiro, L. P., 360
Ricci, F. P., 264
Rice, F. O., 138, 383
Rice, J. L., 400
Rice, M. R., 322
Rice, O, K., 41, 43, 54, 397, 429
Rice, S. A., 187-272; 227, 240, 241, 242, 243, 245, 249, 250, 251, 254, 261, 265, 266, 267, 268, 407
Richards, A. W., 5, 8
Richards, N. E., 298
Richards, R. E., 378, 380
Richardson, F. D., 4
Richardson, J. W., 123
Richardson, M. J., 429
Richardson, W. H., 376
Richey, H. G., Jr., 73
Richmond, J. K., 394
Ridd, J. H., 65, 327, 376
Riddell, F. R., 396
Rideal, E., 172, 173, 289, 290, 299
Ridgway, J. A., Jr., 360
Ridley, R. G., 137
Riedel, H., 452
Riekert, L., 467
Rienäcker, G., 467, 468
Ries, H. E., Jr., 178
Riesenbeck, G. van, 310
Rieske, J. S., 515, 516
Riesz, P., 98
Rigg, T., 141
Rijnders, G. W. A., 354, 357, 359
Rinehart, K. L., Jr., 376
Riou, M., 485
Ripoche, J., 455
Riseman, J., 489
Ritscher, T. A., 488
Rittenberg, D., 320
Ritter, F. J., 362
Ritter, H. L., 296
Riviere, H., 376
Robb, J. C., 48, 49, 60
Robbins, M. L., 178
Roberts, H. L., 295, 396
Roberts, H. R., 361
Roberts, J. B., 362
Roberts, T., 11
Robertson, A. J. B., 468
Robertson, J. D., 175
Robertson, R. E., 372
Robertson, W. W., 142
Robins, J., 141
Robinson, C., 177
Robinson, D. L., 413
Robinson, E. A., 29
Robinson, G. W., 138
Robinson, H. G., 369
Robinson, J. M., 142
Röck, H., 355
Rodberg, L. S., 119
Rodin, A. M., 452
Roe, B. P., 289
Roels, R., 56
Roev, I. M., 470
Rogers, M. T., 373, 377, 380
Roginski, S. S., 449, 451
Rohrlich, F., 121
Rohrschneider, L., 356
Rokhlin, E. M., 65
Rokujo, T., 289
Rolla, M., 4
Römberg, E., 30
Romer, R. H., 384
Roo, J. L. de, 4, 8
Root, D. F., 327
Roothaan, C. C. J., 115, 119, 121, 122, 126
Roper, G. C., 5, 37
Ropp, G. A., 92
Rose, B. A., 348
Rose, I. A., 505, 524
Rose, P. H., 396
Rose-Innes, A. C., 383
Rosen, B., 136
Rosen, G., 392, 393
Rosen, J. B., 392, 395
Rosen, W. E., 378
Rosenbaum, J., 73, 141
Rosenberg, A. J., 421
Rosenberg, H. M., 414
Rosenberg, J. L., 504
Rosenblum, M., 327
Rosenstock, H. M., 88, 101
Rosenstreich, J., 291
Rosi, F. D., 421
Rosman, H., 311
Rosner, D. E., 396
Ross, A., 453
Ross, I. G., 156
Ross, J., 3, 4, 182, 205, 229, 231, 240, 241, 242, 243
Ross, S. D., 76, 456, 458, 459
Rossi Fanelli, A., 309
Rossini, F. D., 2
Rössler, F., 394
Rosswog, K., 155
Rotariu, G. F., 434
Roth, J. F., 353
Roth, R., 489
Roth, W., 137
Rothberg, G. M., 5, 8
Rothery, G. M., 290
Roubie, J., 317
Roughton, F. J. W., 308, 309
Rouse, P. E., 491
Rousson-Perruche, C., 45
Roux, D. G., 361
Roux, E., 523
Roux, E. T., see Tschuikow-Roux, E.
Rowland, T. J., 296
Rowlinson, J. S., 427, 429, 436
Roy, R. S., 45
Rozanski, A., 31
Rozhanskii, V. N., 181
Rozov, V. N., 289
Rtishcheva, N. P., 4
Rubin, R. J., 392, 458, 477
Rudin, M., 394
Rudolph, H. D., 315
Rudolph, P. S., 89, 90, 92
Ruechardt, H., 411
Ruehrwein, R. A., 56
Rüetschi, P., 43
Ruka, R. J., 467
Rumbel, K. E., 398
Rumberg, B., 317
Runeckles, V. C., 363
Ruoff, A. L., 360, 361
Rüppel, H., 316
Rush, P. P., 119
Rushbrooke, G. S., 483
Russel, A. S., 281
Russell, G. A., 68
Russell, J. L., 455
Russell, M. E., 56
Rutgers, A. J., 56
Rutgers, J. G., 58
Rutkowski, C. P., 455
Rutkowski, J., 394
Rutowski, R. W., 396
Rutz, L. O., 461
Ryan, J. H., 480
Rylander, P. N., 90
Ryter, C., 374
Rytina, A. W., 439

S

Saba, W. G., 4
Sabirova, R. D., 82
Sack, R. A., 154, 156, 159, 165, 312, 479
Sackman, J. F., 7
Saddington, K., 285
Sadek, H., 23, 24
Saemen, J. F., 327
Saffman, P. G., 350
Sage, B. H., 440, 443, 444
Sager, R., 509, 520
Sahni, R. C., 123
Said, A. S., 353
Saika, A., 381
Saini, G., 496
St. Pierre, G., 444
Saito, K., 493
Saito, N., 207
Sakai, K., 144, 280, 294, 295
Sakashita, K., 9, 10
Sala, O., 338, 339
Salem, L., 125
Salem, W. J., 488
Salnis, K. Y., 327

Salonen, K., 321
Salsburg, Z. W., 394
Saltman, P., 522
Salwen, H., 122
Salzman, A. J., 98
Samorukov, O. P., 5, 6
Samson, J. A. R., 137
Samuel, A. H., 95
Samuelson, O., 489
Sancier, K. M., 514
Sanda, V., 361
Sandler, Y. L., 461
Sandorfy, C., 125
San Pietro, A., 513, 524
Sansone, G., 108
Santer, J. O., 327
Saporoschenko, M., 91
Sapozhnikov, D. I., 524
Sapozhnikov, Yu. A., 5
Saraceno, A. J., 339
Saraga, L. T. M., see Ter Minassiam-Saraga, L.
Sarakhanian, G., 4
Sarkanen, K. J., 317
Sarkisyan, A. A., 327
Sartel, J. A., 419
Sasaki, K., 287
Saska, L., 327
Sastri, M. V. C., 457
Satchell, D. P. N., 320
Sato, S., 46
Sato, Y., 320
Saturno, A. F., 121
Sauerwald, F., 293
Saunders, M., 74, 377
Saurel, J. R., 4
Savage, W. R., 5
Savel'ev, B. A., 4
Sawyer, W. M., 182
Sazonov, L. A., 4, 5
Scace, R. I., 445
Scaife, B. K. P., 158
Scala, S. M., 396
Scari, O., 136
Scatchard, G., 427, 434
Schaap, W. B., 28
Schade, W. J., 135
Schaeffer, O. A., 92
Schaeffer, R., 94
Schafer, H., 5
Schafer, W. R., 384
Schalit, L. M., 392
Schatz, P. N., 339, 342
Schavo, A., 46
Schawlow, A. L., 385
Schay, G., 353, 451
Scheer, M. D., 46
Schenck, G. O., 98, 101, 312
Scherer, J. R., 339
Scherrer, 164
Schiessler, R. W., 439
Schiff, H. I., 48, 89, 94
Schiffer, D., 492
Schindler, P., 5
Schinke, H., 293
Schlag, E. W., 53
Schlag, J., 324
Schlesinger, H. I., 5
Schlier, R. E., 465
Schmall, E. A., 308
Schmatz, W., 4
Schmeising, H. N., 65
Schmid, E. W., 339
Schmid, P., 141
Schmidt, B. M., 378
Schmidt, F. C., 28
Schmidt, H., 429, 432
Schmidt-Küster, W. J. 354
Schneider, A., 4, 5
Schneider, V. A., 4
Schneider, W. G., 315
Schnepp. O., 143
Schoen, L. J., 46
Schoen, W., 360
Schofield, D., 111
Scholes, G., 95, 96
Scholly, P. R., 359
Scholte, T. G., 156
Schonland, D., 144
Schoonmaker, R. C., 8, 11
Schrama, J., 159, 163
Schreiber, H. P., 451
Schreiner, S., 3, 7
Schrieffer, J. R., 375
Schroeder, W., 506
Schrötter, H., 343
Schubert, W. M., 65, 141
Schukarev, S. A., 4, 8
Schüler, H., 94, 138, 140
Schuler, R. H., 99
Schulman, J. H., 169-86; 101, 171, 172, 174, 175, 177, 178, 180
Schultz, J. W., 339
Schultz, R. D., 398, 400
Schultze, D., 467
Schultze, G. R., 354
Schulz, G. V., 483
Schulze, H., 134
Schulze, M., 5
Schurlock, R. G., 375
Schwab, G.-M., 449, 467
Schwabe, K., 30
Schwartz, C., 109
Schwarz, H. A., 95, 96, 98
Schwarz, K. E., 283
Schwenke, W., 30
Scoins, H. I., 483
Scott, C. G., 354
Scott, D. W., 3, 6, 7, 9, 12
Scott, R. L., 433, 434, 435, 441, 443
Scott, R. P. W., 348, 356
Scott, T. A., 370
Scurlock, A. C., 394, 398
Seager, S. L., 352
Searcy, A. W., 8
Searles, S., 58
Sears, G. W., 421, 422
Sears, P. G., 27, 28
Seban-Danon, J., 100
Sebera, D. K., 323
Secoy, C. H., 327
Sedgwick, R. D., 100
Seel, F., 326, 327
Seelig, H. S., 100
Segal, F., 362
Segel, S. L., 370, 371
Seidel, G., 3, 5, 375
Seifert, F., 27
Seifert, H., 453
Seiflow, G. H. F., 6
Seitz, F., 411, 413, 415, 416
Seldam, C. A. T., see Ten Seldam, C. A.
Selim, M., 322
Selim, M. A., 353
Selis, S. M., 291
Selivanov, V. V., 4, 12
Selivanova, N. M., 4, 5
Selwood, P. W., 462
Semenenko, K. N., 4, 5
Semenov, N. N., 55, 395, 400
Sen, B., 349, 350, 351
Senda, K., 378
Senderoff, S., 282, 291, 292, 293
Senvar, C. B., 97
Serewicz, A., 54
Serpinet, J., 359
Serpinskiĭ, V. V., 7
Servant, R., 381
Sevryukov, N. N., 5
Seymour, E. F. W., 375
Shabica, A. C., 378
Shabtai, J., 357
Shade, R. W., 444
Shakhova, M. N., 5, 8
Shakhtakhtinskiĭ, M. G., 4
Shamma, M., 376
Shapiro, I., 5, 378, 469
Shapiro, S., 383
Sharkey, A. G., Jr., 90
Sharonov, Yu. A., 479
Sharples, A., 494
Sharupin, B. N., 4
Shatenshtein, A. I., 320
Shaw, D. R., 457
Shaw, R., 48
Shcherbinin, V. A., 327
Shchukarev, S. A., 4, 8
Shchukin, E. D., 181
Shedlovsky, T., 26, 28, 29, 34
Sheiko, I. N., 280, 288
Sheĭndlin, A. E., 4
Shelton, R., 143
Shemilt, L. W., 6
Sheppard, J. C., 323
Sheppard, N., 376, 378, 449
Shereshefsky, J. L., 458

Sherman, R. H., 4
Sherwood, H., 508
Sherwood, H. K., 508
Sherwood, T. K., 10
Shestopalov, L. M., 4
Sheverdina, N. I., 100
Shewman, P., 408
Shibata, K., 523
Shidlovskaya, Yu. S., 4, 5
Shidlovskiĭ, A. A., 4, 5
Shih, L.-H., 489
Shilov, A. E., 82
Shimada, R., 139
Shimanouchi, T., 339
Shimizu, H., 380
Shimizu, K., 412
Shimizu, M., 455
Shimizu, T., 378
Shimozawa, K., 370
Shin, H. K., 362
Shindo, K., 467
Shiner, V. J., Jr., 65, 326
Shinoda, K., 182, 434, 438
Shirai, M., 183
Shirkevich, M. G., 4, 6, 7
Shirley, D. A., 4
Shlyapintokh, I. Ya., 4, 12
Shoolery, J. N., 376, 378, 381
Shoosmith, J., 138
Shore, M. G. T., 429
Shorland, F. B., 357
Shpilraĭn, E. E., 4
Shrader, S. A., 7
Shtekher, S. M., 6
Shubochkina, E. F., 319
Shuler, K. E., 392
Shull, H., 108, 109, 110, 113, 116, 118, 119, 121, 122
Shulman, R. G., 385
Shultz, J. L., 90
Shumaker, J. B., 162
Shusharina, A. D., 327
Shuttleworth, R., 444
Shvab, V. A., 393
Shvartsman, L. A., 285
Siddall, T. H., 325
Sidorov, A. N., 469
Siebert, A. R., 460
Siebert, H., 339
Sieg, L., 395
Siestrunck, R., 394
Sihvonen, Y. T., 421
Silberberg, I. H., 6
Siletskiĭ, V. S., 4, 5
Silsbee, R. H., 416
Silver, A. H., 371
Sima, J., 357
Simanouti, T., 337
Simanov, Yu. P., 4, 5
Simmons, J. P., 133
Simmons, R. O., 416
Simnad, M., 287
Simnad, M. T., 417
Simon, W., 80
Simons, J. H., 434
Simpson, C. J. S. M., 338, 339, 340
Simpson, W. T., 109, 124
Sinanoglu, O., 43
Sinclair, J. R., 5, 37
Sing, K. S. W., 469
Singer, S. F., 372
Singh, E. J., 362
Singh, K., 122
Singleton, J. H., 454, 458
Sinitsyn, V. A., 454
Sinitsyna, M. D., 451
Sinke, G. C., 4, 7, 10, 11
Sinton, W. M., 503
Sirkar, S. C., 143
Sirota, A. M., 4
Sirs, J. A., 308, 321
Sisko, A. W., 492
Sissakian, N. M., 520
Sjoberg, N. G., 285
Skell, P. S., 51, 69, 81
Skinner, G. B., 8, 56
Skinner, G. F., 442
Skinner, H. A., 341
Sklyarenko, S. I., 4, 7
Skobets, E. M., 288
Skoulios, A., 176, 179
Skovronek, H. S., 81
Skuratov, S. M., 6
Slabaugh, W. H., 469
Slack, G. A., 445
Slater, N. B., 41, 42, 265
Slaughter, J. I., 57
Sleppy, W. C., 51, 52, 54
Slichter, C. P., 375
Slomp, G., 378
Slonimskiĭ, G. L., 491
Sluss, J. A., 409
Smallman, R. E., 416
Směkal, E., 441
Smellie, L. B., 144
Smetzer, W. W., 418
Smid, J., 327
Smiley, H. M., 27
Smirnov, M. V., 288, 289, 291
Smirnova, I. V., 451
Smit, P., 68
Smith, A. H., 421
Smith, D. F., 5, 8
Smith, E. A., 378
Smith, E. B., 438
Smith, E. R., 7, 155
Smith, F., 441
Smith, F. T., 57
Smith, G. E., 154
Smith, G. P., 295
Smith, H. A., 460
Smith, I. E., 56
Smith, J. A., 44
Smith, J. C., 6, 11
Smith, J. E., 294
Smith, J. F., 4, 5
Smith, J. V., 456
Smith, J. W., 149
Smith, L., 518, 521
Smith, M., 140
Smith, M. J. A., 374
Smith, N. V., 293
Smith, P. L., 4, 5, 7
Smith, R. B., 415
Smith, R. P., 400
Smith, S., 336
Smith, S. G., 37, 327
Smith, S. R., 52
Smith, T. E., 56
Smith, T. S., 378
Smith, W. V., 373
Smits, F. M., 409
Smolinsky, G., 80
Smoluchowski, M. von, 188
Smoluchowski, R., 417
Smutz, M., 352
Smyth, C. P., 149, 157, 159, 160, 163
Smythe, R. L., 4, 5
Snedden, W., 90
Snegirev, B. N., 343
Snelson, A., 9
Snider, R. F., 241
Snow, R. L., 123
Snyder, R. G., 339
Sobotka, H., 178
Sochava, I. V., 6, 7
Soczewinski, E., 362
Sofferis, J. W., 400
Sogo, P. B., 507, 508
Sohma, J., 455
Sokolovskaya, A. I., 343
Solbakken, A., 457
Solem, A. D., 151
Solomon, I., 384
Solomons, C., 275, 278, 291
Solov'eva, L. I., 421
Somayajulu, G. R., 341
Somfalvy, E., 362
Sommer, L. H., 77, 78
Sone, K., 380
Sontini, M., 384
Sorokin, P. P., 373
Sosnovsky, H. M. C., 467
Sousa, J. B. de, 52, 53
Sousa, S. B. de, 90
Sozinov, I. I., 409
Spalding, D. B., 392, 393, 398, 399, 400
Spandau, H., 5
Sparnaay, M. J., 124, 171
Spedding, F. H., 5
Speiser, R., 444
Spence, R. D., 384
Spencer, G. H., 141
Spencer, T., 327
Spencer, T. V., 343
Spencer, W. B., 458
Spice, J. E., 4, 5
Spiesman, G., 109
Spikes, J. D., 501-30; 317, 501, 505, 506, 509, 511, 513, 514, 515, 516, 520, 521

Spilners, A., 417
Spinks, J. W. T., 94
Spitsyn, V. I., 319
Spitzer, R., 11
Spokes, G. N., 137
Sponer, H., 98, 139
Sprenger, D. F., 400
Springall, H. D., 7
Sproull, R. L., 414
Spryskov, A. A., 72
Spurr, O. J., 490
Squire, C. F., 373
Sreedhar, A. K., 4
Srinivasan, R., 57, 58
Srinivasan, T. M., 3, 4, 5
Srivastava, S. N., 327
Staab, H. A., 65
Stace, B. C., 145
Stacey, M., 361
Stackelberg, M. v., 310
Stalden, J. R., 396
Stammreich, H., 338, 339
Stamper, J. G., 4, 135
Stanier, R. Y., 520, 523
Stansbury, E. E., 4, 11
Stanton, H. E., 90
Starer, I., 81
Stark, W. I., 396
Starka, L., 362
Staveley, L. A. K., 442
Staverman, A. J., 489
Steacie, E. W. R., 47, 48, 49, 50, 59
Stedman, G., 319
Steel, B. J., 36
Steel, C., 43, 56
Steele, D., 340, 342
Steele, R. H., 144
Steele, W. A., 453, 459
Steggerda, J. J., 453
Stein, G., 135, 325
Stein, M., 422
Stein, R. B., 290
Steinemann, A., 164
Steinert, L. W., see Wilputte-Steinert, L.
Stepaniants, A. V., 378
Stephen, M. J., 383
Stephens, C., 119
Stephens, D. R., 140
Stern, E. A., 3, 5
Stern, G., 3, 8, 9
Stern, K. H., 25, 291
Stern, R. A., 394
Sternheim, G., 289
Sterrett, K. F., 4
Stevenson, D. P., 88, 90
Stevenson, R. W., 66
Stewart, A. L., 109
Stewart, A. T., 125
Stewart, D. F., 37
Stewart, D. G., 400
Stewart, G. H., 347-68; 352, 360, 361, 362
Stewart, H., Jr., 5
Stewart, R., 380
Stewart, W. E., 378
Stiles, M., 78, 79
Stitt, C., 522
Stock, R., 353
Stockburger, M., 94, 138, 140
Stocking, C. R., 511, 512
Stöckmann, F., 133
Stockmayer, W. H., 483, 486, 489
Stoeckenius, W., 175, 176, 177, 178
Stokes, C. S., 394
Stokes, J. M., 36
Stokes, R. H., 36
Stokes, R. J., 419
Stolzenbach, F. E., 513
Stone, H. H., 327
Storegraven, H., 282
Storey, W. H., 383
Story, J. B., 281
Story, P. R., 357
Stout, J. W., 4, 143
Strachan, E., 138
Strain, H. H., 362, 524
Strandberg, M. W. P., 374, 383
Stranski, I. N., 453
Strathdee, J., 381
Straumanis, M. E., 465
Strauss, A. J., 421
Streeter, D. J., 493
Strehler, B. L., 501, 507
Strehlow, H., 310, 314, 315, 317, 321
Streitwieser, A., Jr., 65, 74, 125
Strelkov, P. G., 5, 6
Streng, A. G., 394, 433
Streng, L. A., 394
Strohmeier, W., 27, 376
Stromberg, A., 276
Strong, J. D., 101
Strong, R. L., 55
Stross, F. H., 349, 352, 359
Stuart, W. I., 454
Stubbles, J. R., 8
Stull, D. R., 4, 7, 10, 11
Sturge, M. D., 409
Sturtevant, J. M., 76
Style, D. W. G., 138
Sugaki, A., 4, 5
Sugano, S., 120
Sugarman, J., 33
Sugawara, T., 375
Sugden, T. M., 8, 11, 395
Sugiyama, S., 461
Suhr, H., 71
Suhrmann, R., 463, 467
Sukhotin, A. M., 29, 36
Sullivan, J. C., 325
Sullivan, J. H., 57
Sullivan, R. J., 440
Summerfield, M., 394, 398
Sun, C. E., 337
Sundbom, M., 120
Sundheim, B. R., 34, 36, 144, 283, 284, 291, 295
Sung, S.-S., 125
Surnarski, A., 30
Susin, A., 416
Suski, L., 289
Sutcliffe, L. H., 378
Sutherland, G. S., 398
Sutherland, K. L., 181
Sutin, N., 417
Sutton, G. W., 396
Sutton, J. R., 454
Sutton, L. E., 65
Sverdlov, L. M., 339
Svirbely, W. J., 321
Swain, C. G., 76, 320, 322
Swalen, J. D., 10, 11
Swallow, A. J., 87
Swanson, L. W., 98, 327
Swanwick, J. D., 7
Swart, K., 26, 29, 37
Swartzentruber, P. E., 82
Sweeley, C. C., 356
Swift, E. H., 327
Swinbourne, E. S., 354
Sworski, T. J., 97
Sychev, A. P., 327
Sychev, V. V., 4
Symmons, H. F., 372
Symons, M. C. R., 34, 35, 36, 73, 140, 141, 376, 383
Synge, R. L. M., 361
Syrett, P. J., 524
Szabó, Z. G., 43
Szent-Györgyi, A., 312
Szwarc, M., 327

T

Taback, H. J., 398
Tabuchi, D., 315
Tabushi, I., 326
Taft, R. W., Jr., 65, 70, 71, 318, 327
Takahashi, K., 380
Takahashi, S., 94
Takamiya, N., 355
Takamura, T., 451
Takashima, S., 504
Takayama, Y., 356
Takayanagi, K., 455
Takemura, T., 491
Takenaka, H., 485
Takenen, L., 321
Takeuchi, T., 4, 5
Talbutt, F. D., 394
Tal'rose, V. L., 91
Talvaldis, V., 288
Tamaki, K., 183
Tamamushi, B., 183
Tamaru, K., 467
Tamássy-Lentei, I., 122
Tamiya, H., 523
Tamm, K., 314

Tamura, M., 492
Tanabe, K., 81
Tanabe, Y., 120, 421
Tanaka, N., 310, 321
Tanaka, S., 416
Tanaka, T., 416
Tanaka, Y., 134, 135, 137, 138
Tanaku, M., 370
Tanenbaum, M., 420
Tanneberger, H., 6
Tanner, H. A., 515
Tarrago, X., 98
Tashiro, C., 4, 5
Tatevskii, V. M., 136
Tatsuzaki, I., 369
Taube, H., 313, 317, 323, 324, 326
Tauber, G. E., 123
Tavares, Y., 339
Taylor, C. S., 281
Taylor, E. H., 101, 450
Taylor, G., 4
Taylor, H., 449
Taylor, H. A., 464
Taylor, J. J., 514
Taylor, J. K., 7
Taylor, R. C., 339
Taylor, R. T., 375
Taylor, S. M., 324
Taylor, T. I., 7
Taylor, T. E., 430, 437
Taylor, W. J., 342
Tchao, Y.-H., 383
Tcherhysheva, A. S., 100
Teale, F. W. J., 144
Tedder, J. M., 44, 45
Tedoradze, G. A., 325
Temkin, M., 298
Temple, G., 111
Tenma, S., 460
Ten Seldam, C. A., 151, 154
Tensmeyer, L. G., 392
Teodorovich, V. P., 327
Teramoto, E., 478
Terenin, A. N., 89, 137, 144, 469, 470, 504, 505
Ter Minassiam-Saraga, L., 171
Terman, F. W., 370
Ternow, A., 353, 354
Terwilliger, M. A., 137
Thacker, R., 436
Thalmeyer, C. E., 444
Theimer, R., 6
Thews, G., 309
Thiele, C., 397
Thiele, E., 42
Thode, E. F., 362
Thode, H. G., 325
Thodos, G., 351
Thom, H. G., 383
Thomas, A. G., 343
Thomas, C. O., 460
Thomas, D. G., 409, 420
Thomas, G., 413
Thomas, G. H., 7
Thomas, H. P., see Preston-Thomas, H.
Thomas, J. B., 509, 516, 519
Thomas, L. H., 119
Thomas, P. J., 55, 56
Thomas, W. J. O., see Orville-Thomas, W. J.
Thompson, M. W., 416
Thompson, S. O., 92
Thomson, R. A. M., 9
Thomson, S. J., 463
Thon, N., 464
Thorell, B., 308
Thorne, C. J., 123
Thorp, J. M., 455
Thrap, R. G., 394
Thrush, B. A., 45, 136
Thurmond, C. D., 407-26
Thyagaragan, G., 343
Tida, K., 123
Tien, C., 351
Tiensuu, V. H., 339
Tiers, G. V. D., 376
Tietz, T., 120
Tiggelen, A. van, 395
Tikhomirov, M. V., 90
Tillett, J. G., 77
Timmermans, J., 427
Timofeev, D. P., 461
Timofeeva, Z. N., 29, 36
Tischer, R. G., 503
Tischer, R. P., 289
Title, R. S., 372
Toby, S., 47, 49
Todd, S. S., 3, 4, 5, 6, 7, 11
Tolbert, B. M., 525
Tolbert, N. E., 501
Tollefson, E. L., 358
Tollin, G., 507, 508
Tolmacheva, T. A., 4
Tomiki, T., 412
Tomishima, Y., 120
Tomizuka, C. T., 409
Tomlinson, J. W., 279, 282
Tomlinson, L., 450
Tommila, E., 321
Tompkins, F. C., 449, 462
Tooke, J. F., 442
Toong, T. Y., 393
Topchien, A. V., 99
Topchieva, K. V., 451
Topley, B., 4
Toporishchev, G. A., 289
Torgesen, J. L., 7
Torkington, P., 337
Tosi, M. P., 408
Toth, P., 358
Toupin, R. A., 164
Tourky, A. R., 32
Townsend, J., 507
Townsend, M. G., 383
Toyoma, Y., 370
Tozer, B. A., 135
Tranchant, J., 359
Trandafirescu, E., 326
Trapeznikova, O. D., 6, 7
Traub, J., 119
Treanor, C. E., 120
Trebst, A. V., 519
Tredgold, R. H., 114
Trefftz, E., 110, 111
Trementozzi, Q. A., 497
Tremin, A., 135
Trendelenburg, E. A., 452
Trenwith, A. B., 54
Tret'yakov, Yu. D., 4, 5
Trevino, E. R., 348
Trichet, H., 136
Tricomi, F. G., 108
Trifan, D. S., 66
Trigger, K. R., 372
Trischka, J., 122
Troshkina, V. A., 4
Trossarelli, L., 496
Trotman-Dickenson, A. F., 45, 47, 48, 49, 50, 51, 52, 55, 56, 65
Troutner, V. H., 441
Truby, F. K., 383
Truesdell, C., 391
Trullo, J. G., 123
Trumbore, C. N., 97, 101
Tschuikow-Roux, E., 53
Tseplyaeva, A. V., 5
Tskhai, V. A., 464
Tsujimoto, H. Y., 519
Tsuzuki, T., 7
Tsvetkov, V. N., 495
Tucker, C. W., 416
Tuckerman, M. M., 362
Tuijnman, C. A. F., 493
Tung, L. H., 489
Tunitskii, N. N., 90
Turco, A., 324
Turnbull, D., 161, 410
Turner, A. H., 48, 49
Turner, D. W., 144
Turner, J. J., 378
Turner, R. B., 65
Turney, A. T., 327
Turrell, G. C., 339
Tusa, G. F., 358
Tuttle, T. R., Jr., 383
Tuul, J., 465
Tweet, A. G., 410, 419
Twomey, S., 420
Tycko, D. H., 119

U

Ubbelohde, A. R., 140, 144, 293, 298, 431
Ueda, R., 520
Uenishi, R. K., 4
Ueta, M., 412
Ufford, C. W., 119
Uhlenbeck, G. E., 43, 192
Uhlig, H., 418
Uphaus, R. A., 144

Urey, H. C., 337
Uri, N., 509
Urnes, A., 282
Urnes, S., 298
Ushanova, N. I., 5
Utianskaya, E. Z., 378
Utiyama, H., 490
Utvary, K., 29
Uva, A., 469

V

Vagin, E. V., 461
Vaglio-Laurin, R., 396
Valentiner, S., 4
Van Arkel, A. E., 281
Van Artsdalen, E. R., 273-306; 45, 276, 278, 279, 281, 283, 285, 286, 291, 293, 296, 299
van Beek, L. K. H., see Beek, L. K. H. van
van Deemter, J. J., see Deemter, J. J. van
Van Der Auwera, D., 45
van der Leun, A. A. J., see Leun, A. A. J. van der
Van der Lugt, W., 375
Van der Maesen, F., 154
Vandermeer, R. A., 421
Vanderslice, J. T., 124
van der Veen, R., see Veen, R. van der
Van Dijk, H., 4
Van Dooren, C. Z., 412
van Doorn, A. B. C., see Doorn, A. B. C. van
Vanecek, S., 362
Van Eick, A. J., 163
van Heerden, C., see Heerden, C. van
Van Holde, K. E., 488
van Hove, L., see Hove, L. van
Vanicheva, L. L., 4
Van Itterbeek, A., 4
van Kampen, H., see Kampen, H. van
van Krevelen, D. W., see Krevelen, D. W. van
Van Looy, H., 81
Vanngard, T., 373
van Riesenbeck, G., see Riesenbeck, G. van
Van Schalkwyk, T. G. D., 71
van Tiggelen, A., see Tiggelen, A. van
Van Vleck, J. H., 154
Van Winkle, M., 441
Varekamp, F. H., 4
Varma, K. T. R., 299
Vashenin, S. F., 289
Vasil'kova, I. V., 4
Vatter, A. E., 511
Vecher, A. A., 4
Vedeneev, A. V., 320
Vedrikh, M. S., 5
Veen, R. van der, 515
Vegter, G. C., 68
Veits, I. V., 4
Vejlby, K., 522
Venkataraman, B., 308
Venkatasubranian, N., 326
Venkateswarla, P., 135
Venkateswarlu, K., 343
Vennesland, B., 517
Verdier, P. H., 337
Verdin, A., 358
Vereshchagin, A. G., 362
Vereshchetina, I. P., 276
Verheijke, M. L., 419
Verkerk, B., 418
Verma, G. S., 37, 314, 315
Vermout, P., 421, 453
Vernon, L. P., 518, 519
Versnel, J., 69
Verwey, E. J. W., 170
Vetrenko, E. A., 5
Vial, M. H., 357
Vielstich, W., 310, 321
Vieth, R. F., 372
Vilesov, F. L., 89
Vilesov, F. I., 137
Villalobos, R., 352
Vines, R. G., 179
Vinnic, M. I., 378
Vinograd, J. R., 488
Vinogradova, K. I., 421
Vishniac, W., 505, 522, 524
Viswanathan, T. S., 457
Vitrikhouskii, N. I., 421
Vivo, J. L., 308
Vizbaraite, Y. I., 120
Vodar, B., 4, 5, 6, 134, 142
Voevodskii, V. V., 53
Voge, H. H., 359
Vogl, J., 468
Vohra, S. P., 6
Voĭtkevich, S. A., 7
Volchenkova, Z. S., 291
Volk, H., 9, 10
Vol'kenshtein, F. F., 450
Vol'kenshtein, M. V., 479
Vol'kenshtein, T., 449
Volman, D. H., 60, 98, 327, 459
Volpi, G. G., 46
Volpin, M. E., 82
von Elbe, G., see Elbe, G. von
von Kârmân, T., see Kârmân, T. von
von Smoluchowski, M., see Smoluchowski, M. von
von Wartenberg, H., see Wartenberg, H. von
von Wettstein, D., see Wettstein, D. von
von Winbush, S., see Winbush, S. von
Vook, F. L., 416
Voorn, M. J., 486
Vos, F. C. de, 155
Voskresenskaya, N. P., 523
Vukalovich, M. P., 4, 5
Vyakhirev, D. A., 352
Vysotskaya, N. A., 319

W

Wacker, P. F., 154
Wada, A., 162
Waddington, G., 3, 6, 7, 9, 11, 12
Wade, 277
Wadley, E. F., 74
Wagman, D. D., 2, 395
Wagner, C., 417
Wagner, C. D., 100
Wagner, G., 4
Wagner, R. S., 414, 420
Wahl, A. C., 93, 309, 323, 324
Wahrhaftig, A. L., 88
Wait, S. C., 143
Waite, T. R., 416
Wajid, M. A., 486
Waksmundzki, A., 362
Walden, G. E., 5
Waldman, M. H., 451
Walisch, W., 311
Walker, B. E., Jr., 7
Walker, D. A., 517
Walker, J. R., 524
Walker, R. M., 415, 416
Walkley, J., 438, 443
Wall, F. T., 477, 478, 480
Wall, L. A., 102
Wall, R. F., 351, 356
Wallace, T. C., 181
Wallace, W. J., 376
Wallenstein, M. B., 88
Wallin, L. E., 286
Walling, C., 67, 68
Walling, J. F., 432
Wallwork, G. R., 418
Walmsley, D. A. G., 5, 9
Walmsley, S. H., 143
Walsh, A. D., 57, 135
Walsh, J. R., 143
Walsh, P. N., 4, 5
Walsh, W. M., 372
Walters, W. D., 56
Wang, J. H., 36, 254, 327

Wang, Y., 119
Wang-Chang, C. S., 43
Wannagat, U., 34
Warburg, O., 504, 506, 512, 522, 523
Ward, J., 188
Ward, J. C., 177
Ward, R. B., 361
Ward, R. L., 312, 323, 383
Warren, G. W., 355
Warren, R. R., 355
Wartenberg, H. von, 4
Wartenpfuhl, F., 5
Wartik, T., 65
Washburne, R. N., 327
Wasmuth, C. R., 326
Wassenaar, T., 4
Wasserman, E., 383
Wassermann, A., 31, 141
Watanabe, H., 412
Watanabe, H., 412
Watanabe, K., 137, 140
Watanabe, S., 455
Watelle-Marion, G., 275, 299
Waters, D. N., 343
Waters, W. A., 65
Watkins, G. D., 370, 372, 408, 416
Watson, G. M., 293
Watson, P. E., 119, 120
Waugh, J. S., 378
Way, S., 400
Wayman, D. H., 394
Wayrynen, R. E., 506
Weaver, E. E., 4
Weaver, H. E., 372, 383, 416
Webb, L. A., 102, 416
Webb, M. J., 398
Webb, M. B., 416
Webb, W. W., 422
Weber, J., 144
Weber, J. H., 6, 440
Weber, R., 363
Weber, U. v., 6
Webster, E. R., 73
Wechsler, M. S., 416
Wedler, G., 463, 467
Wegener, P. P., 397
Wehner, J. F., 122
Wehrli, A., 358
Weil, J. A., 372
Weill, G., 480
Weinberg, F. J., 395
Weinberger, D., 523
Weiner, L. C., 181
Weiner, S., 98
Weinhold, A. R., 363
Weinstock, B., 4
Weinstock, H., 414
Weis, C., 67
Weisberg, H. E., 321
Weise, C. H., 180
Weise, E., 5
Weisel, C. A., 439
Weisgerber, P., 278
Weiss, H. G., 469
Weiss, J., 95, 141
Weiss, S., 327
Weissberg, S. G., 488
Weissler, G. L., 137
Weissman, H. B., 339
Weissman, S., 312, 323
Weissman, S. I., 323, 382
Weizer, V. G., 408
Welch, B. J., 5
Welch, D., 280
Weller, A., 312, 316, 321
Weller, W. W., 4
Wells, R. A., 362
Weltner, W., Jr., 121
Welton, T. A., 196
Wendlandt, W. W., 37
Wendt, H., 315, 317
Wenger, F., 55
Weniger, S., 136
Wentink, T., 339
Wentorf, R. H., 298
Wergeland, H., 189
Wernick, J. H., 414
Wertz, J. E., 308
Wessling, R. A., 496
Wessels, J. S. C., 509, 514, 515, 517
West, B. O., 324
West, E. D., 2, 4
Westenberg, A. A., 400
Westerlund, H., 136
Westmacott, K. H., 416
Westrum, E. F., Jr., 4
Wet, W. J. de, 352
Wetmore, F. E. W., 277, 280, 281, 284
Wettstein, D. von, 509, 510
Wever, H. P., 359
Weyenberg, D. R., 77
Weyna, P. L., 82
Whalley, E., 4
Whatley, F. R., 516, 517, 519
Wheatley, K., 469
Wheeler, D. H., 378
Wheeler, D. J., 477
Wheeler, O. H., 451
Wheelock, T. D., 352
Whelan, M. J., 413
Whiffen, D. H., 335-46; 340, 342, 343, 381
Whipple, E. B., 376, 378
White, A., 144
White, D., 4, 5, 353, 438, 460
White, R. F. M., 376
White, W., 289
Whittaker, A. G., 32, 377
Whittingham, C. P., 501, 506, 511, 512, 513, 515, 521
Whittingham, G., 56
Whittle, E., 31
Whyte, G. N., 87
Wickberg, B., 362
Widom, B., 43
Wiebe, R., 441, 443
Wiederhorn, S., 142
Wiedersich, H., 422
Wieland, K., 395
Wiersma, D. S., 358
Wigner, E., 116
Wijnen, M. H. J., 48, 49, 50
Wilfong, R. E., 397
Wilhoit, E. D., 27, 28
Wilkins, R. G., 318
Wilkinson, F., 46, 47
Wilkinson, G., 3, 4, 6, 34
Wilkinson, P. G., 134
Wilks, E. M., 413
Wilks, P. H., 318
Willard, J. E.,
Williams, A., 10, 55, 65
Williams, D., 378, 383
Williams, F., 391
Williams, F. A., 392, 393, 398, 399, 400
Williams, G. A., 378, 381
Williams, H., 395
Williams, I. W., 319
Williams, J. W., 488
Williams, L. C., 488
Williams, M. L., 161
Williams, R., 139
Williams, R. E., 378
Williams, R. L., 341
Williams, R. R., Jr., 91, 92
Williams, T. F., 102
Williams, V. D., 443
Williamson, A. G., 435, 441, 443
Williamson, G. R., 485, 486
Williamson, R. B., 492
Wilputte-Steinert, L., 69
Wilsdorf, D. K., see Kuhlmann-Wilsdorf, D.
Wilsdorf, H. G. F., 410, 416
Wilson, A., 182
Wilson, D. J., 42
Wilson, D. K., 373
Wilson, E. B., 335, 337, 341, 342
Wilson, E. B., Jr., 153
Wilson, I., 320
Wilson, P. R., 418
Wilson, W. A., 100
Winans, J. G., 145
Winbush, S. von, 292
Windle, J. J., 381
Windsor, M. W., 139
Winegard, W. C., 421

Winfield, M. E., 327
Winkel, P., 418
Winkler, C. A., 46
Winkler, G., 26, 29, 30
Winkler, H., 454
Winkler, W., 458
Winstein, S., 37, 327
Winter, E., 314, 517
Winterberger, M., 410
Wippler, C., 485, 496
Wirth, A. de, 442
Wirth, H. E., 7
Wise, H., 392, 393, 398
Wiser, R., 523
Wisner, R. J., 119
Witt, H. T., 316, 317
Witt, N. T., 507
Witt, W. P., 5, 8
Wittig, F. E., 4, 444
Wittke, J. P., 372
Woessner, D. E., 313, 385
Wolcott, N. M., 4
Wolf, D., 79
Wolf, F., 353, 354, 469
Wolf, H. C., 133, 143
Wolf, R. L., 173
Wolf, W. P., 6
Wolfe, R. S., 511
Wolff, W. F., 452, 457
Wolfhard, G., 393
Wölfle, R., 327
Wolfrom, M. L., 383
Wolfsberg, M., 88
Wolga, G. J., 374
Wolken, J. J., 509, 510, 514, 516
Wolkenstein, M., 343
Wolkers, G. J., 4
Woo, L. F., 327
Wood, B. J., 392, 398
Wood, J. H., 7, 120
Wood, R. E., 292, 296
Wood, W. W., 394
Woodbrey, J. C., 435
Woodbury, H. H., 373
Woodruff, T. O., 374, 411
Woodward, L. A., 295, 296, 341, 343
Woodworth, R. C., 51
Worlton, W. J., 4, 5, 6
Worrall, I. J., 296
Worrall, R., 103
Worsley, B. H., 120
Worsley, M., 457
Wright, C. V., 136
Wright, F. J., 138
Wright, G. A., 327
Wright, M. R., 317
Wronski, M., 327
Wulfman, C. E., 122
Wyller, A. A., 136
Wyluda, B. J., 385
Wyman, J., 155

Y

Yaffe, I. S., 278, 279, 281, 293
Yamagata, Y., 378
Yamakawa, H., 478, 479, 481, 490
Yamanaka, T., 182
Yamasaki, R. S., 370
Yamawaki, T., 4, 5
Yamazaki, I., 309
Yamazaki, M., 122, 124
Yampol'skii, B. Ya., 181
Yanagase, T., 277
Yang, A. C., 465
Yang, K., 93
Yang, L., 277, 287, 292
Yang, N. C., 100
Yankwich, P. E., 44
Yarborough, V. A., 355
Yarrington, R. M., 6
Yasuda, M., 31
Yasumori, I., 43
Yates, D. J. C., 179, 468
Yeh, S.-J., 80
Yen, L. C., 437
Yim, E. W., 279
Yoffe, A. D., 10
Yonezawa, T., 125
Yokota, M., 262
Yokozawa, Y., 372
Yoshida, S., 416
Yoshino, T., 343
Yosim, S. J., 4, 292
Yost, H. T., Jr., 320
Young, A. R., II, 36
Young, A. S., 421
Young, J. F., 351
Young, J. R., 358
Young, L., 288, 292, 418
Young, R. C., 109
Young, T. H. Y., 92
Young, W. H., 109, 114
Yu, S.-C., 489
Yuan, E. L., 57
Yutsis, A. P., 120

Z

Zahn, C., 357
Zainal, H. C., 440
Zalevski, N. I., 452
Zandstra, P. I., 125
Zanker, V., 141
Zarzycki, J., 296
Zaverina, E. D., 451
Zeigenbalg, S., 30
Zeigler, R. K., 4, 5, 6
Zeldes, H., 102, 383
Zeldovich, Y. B., 392, 393
Zellinskaya, T. F., 451
Zel'tser, G. I., 114
Zermelo, E., 188
Zettlemoyer, A. C., 169, 180, 449
Zhabrova, G. M., 451, 464
Zharkova, L. A., 4, 5
Zhdanov, S. P., 468
Zhil'tsova, D. F., 322
Zhukhovitski, A. A., 461
Zieger, G., 317
Ziegler, J. B., 378
Zielen, A. J., 325
Zielinski, E., 459
Zimm, B. H., 162, 163, 432, 481, 486, 487, 491
Zimmerman, J. R., 454
Zlomanov, V. P., 4, 5
Zmerli, A., 139, 143
Zmítko, J., 354
Zubarev, V. N., 4, 5
Zucrow, M. J., 399
Zuiderweg, F. J., 349, 350, 351
Zukoski, E. E., 400
Zvyagintsev, O. E., 319
Zwanzig, R. W., 151, 240, 241, 242, 243
Zwarg, G., 327
Zweig, G., 360, 363
Zwickel, A. M., 323
Zwolenick, J. J., 22
Zwolinski, B. J., 323

SUBJECT INDEX

A

Acetaldehyde
  oxidation of, 326
Acetamide
  conductance in, 26
Acetic acid
  dissociation of, 310
  photosensitization of, 60
  thermodynamic properties of, 6
Acetic anhydride
  hydrolysis of, 322
Acetone
  acid-base equilibria in, 32
  biacetyl and, 58-59
  phosphorescence decay of, 102
  photolysis of, 47
Acetonitrile
  acid-base equilibria in, 31
  conductance in, 26-27, 29
Acetophenone
  acid-base equilibria in, 31
Acetylene
  excited states of, 123
  radiolysis of, 90-91
    products of, 93
  singlet-triplet bonds of, 139
  thermodynamic properties of, 6
Acidity
  in acetonitrile, 31
  of acrylic acids, 71
  dissociation constants and, 80-81
  in fused salts, 274
  kinetics on, 310, 320-21
    micelle formation and, 81
  nonaqueous media and, 29-32
Acoustic wave
  molecular momentum transport and, 260-61
Acrolein
  photosensitization of, 60
Acrylamide
  radiolysis of, 97
Acrylic acid
  acidities of, 71
Activation energy
  for adsorption
    crystal faces and, 468
  conductance in fused salts and, 278-79
  for self-diffusion in fused salts, 286
  for transport in crystals, 264-69
Activation volume
  for self-diffusion, 266
Activity coefficient
  chromatography and, 354-55
  in fused-salt systems, 291, 298-99
  gas-liquid mixtures and, 429
Addition reaction
  of carbonyl compounds, 78-80
Adenosine triphosphate
  photosynthesis of, 502-3, 516-18
Adsorbent
  kinetics of adsorption and, 464
  surface properties of, 450-53
Adsorption
  chemical, 461-70
  chromatography and, 351-52, 459-61
  crystal growth and, 453
  diffusion and, 455
  irradiation and, 452
  at liquid interfaces, 181-83
  physical, 453-61
    chemisorption and, 457-58
  pore structure and, 451-52
  on solids
    surface energy and, 180-81
  surface area and, 450-51
Aerodynamics
  heating rates and, 396
Air
  thermodynamic properties of, 4-5
  for turbojet engines, 400
Alcohol
  acid-base equilibria in, 32
  chemisorption of, 468-69
  chromatography of, 461
  conductance in, 28, 29
  dielectric polarization and, 158
  oxidation of, 326
  protolysis kinetics on, 378
  radiolysis of
    in solids, 102
  solutions of, 441-42
  thermodynamic properties of, 6, 7
  viscoelastic relaxation of, 161
  water and, 442
Alcoholysis
  kinetics on, 322
Aldehyde
  photosensitization of, 60
  steric hindrance in, 143
Aldol condensation
  mechanism of, 79-80
Alkali halide
  color centers in, 411-12
  conductance of, 22, 27, 280
  crystals of
    spectra of, 144
  dimerization of, 8
  dislocations in, 414
  irradiation of, 416
  magnetic resonance of, 373-74
  molten
    density of, 293
    properties of, 278
    x-ray diffraction on, 296
  quadrupole resonance of, 370
  solvation spectra and, 140-41
Alkali ion
  conductance of, 22, 27
  in fused salts
    solubility of, 292
Alkali metal
  thermodynamic properties of, 4, 5
  see also specific metals
Alkaline earth halide
  conductance of, 280
  molten
    surface tension of, 294
    x-ray diffraction on, 296
Alkaline earth metal
  thermodynamic properties of, 4, 5
  see also specific metals
Alkane
  electron impact and, 88
  partial molal volumes of, 440
  partition coefficient of
    chromatography and, 355-56
  phase diagrams of, 442
  radiolysis of, 92-94, 99-100
    nitric oxide and, 93
  second virial coefficient and, 428
  solutions of
    thermodynamics of, 440
Alkyl bromide

conductance in, 29
photodecomposition of, 58
Alkyl halide
appearance potentials of, 91
nuclear resonance of, 369
solvolysis of, 322
thermodynamic properties of, 7
viscoelastic relaxation of, 161
Alkyl radical
decomposition reactions of, 51-53
to ethylene, 50-51
hydrogen abstraction from kinetics on, 47
ionization potentials of, 90
isomerization of, 52
spin resonance of, 383
see also Radical
Alkyl sulfite
hydrolysis of, 77
Alloy
diffusion in, 408
irradiation of, 416
thermodynamics on, 444-45
Allyl radical
hydrogen abstraction and, 53
Alpha helix
dipole moment of, 162
Alumina
chemisorption and, 469
in chromatography, 354
Aluminum
crystal growth of, 421
dislocations in, 413
molten complexes of conductance and, 281-82
nuclear resonance and, 375-76
oxidation of, 418
point defects in, 410, 411
Aluminum oxide
whiskers of, 422
Amide
conductance of, 26, 27
Amido radical
spectra of, 138
Amine
aromatic
spectra of, 144
carbonyl addition and, 78-79
chemisorption of, 469
ionization potentials of, 89
quadrupole resonance of, 370
thermodynamic properties of, 7
Amino acid
fluorescence of, 144
photosynthesis of, 523
thermodynamic properties of, 7
Ammonia
conductance in, 32-36
dielectric virial coefficients of, 154
nitrous acid and, 326
quadrupole resonance of, 370
sodium and, 141
spin-spin coupling and, 381
structure of, 123
synthesis of
radiation-induced, 94
Ammonium perchlorate
propellants of, 398
Angular momentum
atomic structure and, 114-15
Aniline
oxidation of, 326
quadrupole resonance of, 370
Anisotropy
of colloid systems, 176
Annealing
kinetics on, 419
point defects and, 410
radiation damage and, 415-16
Anthracene
electronic structure of, 125
radiolysis and, 99-100
spectra of
crystals and, 143
Antimony chloride
conductance of, 26
Appearance potential
measuring standard for, 88-89
Aqueous solution
thermodynamics on, 442
Argon
adsorption of
surface area and, 450
wave function for, 120
Argon-krypton system
temperature and, 432-33
Aromatic compound
charge-transfer spectra and, 140
chromatography of, 357
electronic structure of, 125
emission spectra of, 138
polarization of phosphorescence of, 139
proton shielding and, 378
spectra of
crystals and, 143
pressure and, 142
thermodynamic properties of, 6, 7
in solution, 440-41
Aromatic radical
spin resonance of, 383
Arsenic compound
reduction of, 325
Ascorbic acid
photooxidation of, 518
Azine
transitions of, 141

B

Basicity
chemistry of, 80-81
nonaqueous media and, 29-32
sound absorption and, 315-16
Bentonite
adsorption on, 456
Benzaldehyde
aldol condensation and, 79-80
Benzene
adsorbent area and, 451
from acetylene radiolysis, 93
arylation of
radicals and, 65
chromatography of, 461
complexes of
electron resonance of, 373
dielectric constant of, 155
emission of, 138
luminescence decay of, 316
proton shielding and, 378
solubility of hydrocarbons in, 440
specific heat of, 451
spectra of
crystals and, 143
in flames, 137
at low temperatures, 139
Raman, 343
spin-spin coupling and, 380
substitution on
equations for, 70-71
thermodynamic properties of, 6
valence bond theory of, 124
water and, 442
Benzophenone
acid-base equilibria in, 31
transitions of, 142
Benzoquinone
chloroplast activity and, 514
kinetics on, 308-9
Benzoyl peroxide
decomposition of, 67
Benzylamine
fragmentation of, 137
Benzyl radical
detection of, 138
Beryllium
wave function for, 117, 121
Beryllium hydride radical

structure of, 122
Biacetyl
acetone and, 58-59
photosensitization of, 60
Bimolecular reaction
gaseous, 43
Binary system
colloid structures and, 175-77
of hydrocarbons
interactions and, 438-89
second virial coefficient and, 427-29
Biochemistry
of photosynthetic reactions, 522-25
Biology
electronic spectra and, 144
photosynthetic organelles
structure-function and, 509-21
Biphenyl
chromatography of, 358
steric hindrance in, 143
Birefringence
of chlorophyll, 510
flow-
polymer solutions and, 495
Bismuth
crystal growth of, 421
magnetic resonance and, 375
Boiling point
hydrogen bonding and, 443
Boltzmann equation
transport theory and, 229-34
Bond angle
spin-spin coupling and, 379-80
Bond length
force constants and, 341
Boron
quadrupole coupling and, 371
Boron halide
force constants and, 338
quadrupole resonance in, 369
Branching
of polymers, 481
Brass
diffusion in, 408
dislocations in, 414
Bromide
dielectric loss of
in solids, 165
see also Halide; and specific halides and bromides
Bromination
of olefins, 311
stereospecific, 69
Bromine
adsorbent area and, 451
photolysis of, 45
Brownian motion
transport theory and, 203-5
Butadiene
conjugation and, 125
polymerization of
radiation-induced, 103
singlet-triplet bonds of, 139
Butane
adsorption of
specific surface area and, 451
transitions and, 459
halogenation of, 44-45
partition coefficient of
chromatography and, 355-56
radiolysis of, 94
thermodynamic properties of, 6
Butanol
hydrogen bonding and, 377
Butene
irradiation of, 103
isomerization of, 53
oxygenation of, 46
Butyl peroxide
decomposition of, 56
Butyraldehyde
photolysis of, 52

C

Cadmium sulfide
irradiation of, 416
Calcium
polarizability of, 120
Calorimetry
limitations of, 11
moving-bomb, 12
Capillarity
chromatography and, 360
Carbohydrate
photosynthesis of, 522-23
Carbon
colloidal
pore structure of, 452
surface area of, 450, 451
in liquid silicon, 445
photosynthetic pathway of, 522-23
thermodynamic properties of, 5
wave function for, 120
Carbon-carbon bond
quantum theory of, 124
Carbon dioxide
equation of state of, 151
excited states of, 123
fixation of, 519-20
heat of adsorption of, 456
in liquids
second virial coefficient and, 429
microwave absorption of
quadrupole interaction and, 154
photosynthetic pathway of, 522-23
radiolysis of, 94
solubility of, 443
thermodynamic properties of, 5
valence-bond structures of, 337-38
in water
kinetics on, 313
Carbon disulfide
excited states of, 123
Carbon-hydrogen bond
methylene reactions and, 82-83
Carbonic anhydrase
magnetic resonance and, 313
Carbonium ion
reactions of, 73-74
spectra of, 141
Carbon monoxide
adsorption of
surface potential and, 462-63
chemisorption of, 465-66
excited states of, 123
heat of adsorption of, 456
radiolysis of
in organic liquids, 101
thermodynamic properties of, 5
Carbon tetrachloride
Raman spectroscopy and, 343
thermodynamic properties of, 6
Carbon tetrafluoride
adsorption of, 458
Carbonyl addition reaction, 78-80
Carbonyl compound
of metals
force constants and, 340
Carboxylation
electrophilic displacement and, 78
of ribulose diphosphate, 522
Carboxylic acid
chromatography of, 361
ionization of, 31
Carcinogenic activity
electronic structure and, 125-26
fluorescence and, 144
Carotene
chloroplast activity and, 514
conductance of, 508
Carotenoid
epoxidation and, 524
photophosphorylation and, 518-19

redox reactions of, 520-21
Catalysis
aerodynamic heating and, 396
of carbonyl additions, 79
chromatography and, 359-60
of hydrolytic reactions, 321-22
mercury poisoning and, 463-64
nucleophilic substitutions and, 75-76
Cellulose
as chromatographic support, 362
rheological properties of, 490
Centrifugal distortion constant
force constants and, 337
Cephalin
protein interaction with, 176
Cerium
in fused salts
conductance and, 282
solubility of, 292
Cetyl alcohol
monolayers of, 179
Chabazite
structure of, 456
Chain reaction
gaseous, 43
rate constants for, 65
Chaos
Boltzmann derivation and, 229-34
Charcoal
chromatography kinetics and, 351
Charge-transfer spectra, 140-41
Chelation
kinetics on, 318-19
Chemical bond
quanticule theory and, 126
quantum theory and, 121-22
Chemical potential
chromatography and, 361
polymer solutions and, 483
see also Activity coefficient
Chemical reaction
fast, 307-17
heats of, 8-9
solid state, 417-20
in solution, 317-27
in supersonic flow, 394
Chemical shift
of protons
magnetic resonance and, 376-78
Chemiluminescence
from molecules, 54
from radicals, 53
Chemisorption, 461-70
kinetics on, 463, 464
physical adsorption and, 457-58
Chloride
conductance of, 26
molten
decomposition potentials of, 288
diffusion of, 285-86
transport numbers for, 283-84
oxidation of, 325
quadrupole resonance in, 371
Chlorine
spectra of, 135
Chlorobenzene
nuclear resonance of, 369, 370
Chlorofluorocarbon
solutions of, 437-38
Chloroform
hydrogen bond and, 442
proton shielding and, 378
pyrolysis of, 82
second virial coefficient and, 429
Chlorohydrin
hydrolysis of, 322
Chloromethane
Raman spectroscopy and, 343
Chlorophyll
arrangement of, 510-11
carbon dioxide and, 522-23
chromatic transients of, 506-7
conductance of, 508
emission spectra of, 144
energy transfer and, 503-5
fluorescence yield of, 505-6
hydrogen transfer and, 524
Chloroplast
conductance of, 508
luminescence of, 507-8
photolysis of water and, 502
radicals and, 509
stability of, 512-14
structure of, 509-11
function and, 511-21
Cholesterol
crystals of, 177
Chromate
force constants and, 338-40
Chromatography
applications of, 359-60
centrifugal, 360-61
chemistry of, 347-68
circular, 362
column-liquid, 363
electro-, 363
gas, 348-60
adsorption and, 459-61
kinetics and, 351-52
paper, 360-63
spectroscopy and, 357-58
supporting media for, 356-57
thermodynamics of, 353-56, 361-62
Chromatophore
structure of, 509-11
function and, 518-19
Coarse graining, 190-93
Kirkwood theory and, 227-29
Cobalt
nuclear resonance of, 375
Colloid chemistry, 160-86
equation of state and, 170-71
literature, 169-70
structures, 175-79
surface potentials and, 171-75
Color center
in alcohols, 102
lattice defects and, 411-13
magnetic resonance and, 374
Column efficiency
chromatography and, 349
Column resolution
chromatography and, 349-50
Combination reaction
radicals and, 48-50
Combustion
chemistry of, 391-406
in engines, 399-400
hypersonic boundary layers and, 396
of propellants, 393, 397-98
of sprays, 398-99
Complex ion
in fused salts, 290
conductance and, 279-81
Conductance
of acids, 29-32
of bases, 29-32
of carotene, 508
of chloroplasts, 508
colloidal systems and, 176
detergent solutions and, 182
in fused salts, 277-83
viscosity and, 277
irradiation of solids and, 101-2
of metal in solution, 32-36

photo-
chlorophyll and, 508
theories of, 21-25
thermal
corresponding states and, 263
dense fluids and, 254-56
derivation of, 206-7
dislocations and, 414-15
of electrolyte solutions, 37
expression for, 218
Fokker-Planck equation and, 248
in fused salts, 287
transport theory and, 212
Conformational analysis
thermodynamics and, 10-11
Congruence principle
hydrocarbon solutions and, 439
Conjugated system
theory of, 124-25
Contact angle
surface energy and, 179-81
Coordination number
in fused salts, 297
Coordination sphere
water-metal ion
kinetics on, 313, 317-18
Copolymer
graft
lattice theory and, 485
Copper
dislocations in, 413
irradiation of, 415-16
nuclear resonance of, 375
oxidation of, 419
vacancies in, 408
whiskers of, 422
Coriolis coupling
force constants and, 336
Correlation energy
of electrons, 115-16
Corresponding state
second virial coefficient and, 429
for transport properties, 261-64
Corrosion
kinetics on, 417-18
Cracking
chromatography and, 359
Critical micelle concentration
detergents and, 182-83
Critical region
of fluorocarbons
temperature and, 434-35
of nonelectrolyte solutions, 429-32
Cryolite
conductance in, 282
Cryoscopy
on metal salts, 37
on molten salts, 291
Crystal
color centers in, 411-13
dielectric constants of, 164-65
faces
adsorption and, 467, 468
growth, 414, 420-22
adsorption and, 453
inorganic
spectroscopy and, 143-44
irradiation of
magnetic resonance and, 374
liquid
structure of, 177
melting of
theory of, 298
organic
spectroscopy and, 143
radiation damage and, 415-17
self-diffusion in, 264-69
vacancy movement in, 411
Crystal field theory, 125
substitution reactions and, 317
Cumene
radiolysis of, 100
Cuprene
from acetylene radiolysis, 93
Cyanide
quadrupole resonance of, 370
Cyclic compound
conformations of, 11
thermodynamic properties of, 6, 7
see also Heterocyclic compound; and specific compounds
Cyclohexane
radiolysis of, 99
Cyclohexanol
acid-base equilibria in, 31
Cyclohexanone
acid-base equilibria in, 31
Cyclopentane
chromatography of, 357
conformations of, 11
thermodynamic properties of, 6
Cyclopentyl radical
decomposition of, 52
Cyclopropane
isomerization of, 53
Cytochrome
kinetics on, 308
photosynthesis and, 521

D

Decomposition potential
in fused salts, 288
Decomposition reaction
of gas molecules, 55-56
of peroxides, 66-67
Denaturation
interfaces and, 174-75
Density
of fused salts, 293
of hydrocarbon solutions, 439
matrices
electronic structure and, 113-14
Deoxyribonucleic acid
proton shielding and, 378
Detergent
chromatographic tailing and, 356
diffusion of, 182
structure of, 176
Detonation, 394
Deuterium
chromatography of, 60
and hydrogen mixtures, 433
partial molal volume of, 443
photosynthesis and, 523-24
thermodynamic properties of, 4
vibration-rotation spectroscopy and, 342
Deuterium exchange
in methyl radicals, 53
Deuterium oxide
hydrolytic reactions and, 322
oxygen exchange of, 319
photosynthesis and, 523-24
on reaction rates, 76
redox reactions and, 324
thermodynamic properties of, 4
Diagonal singularity condition
coarse graining and, 227-29
equilibrium approach and, 219-27
Diamagnetism
of metals in solution, 33, 35
solvation spectra and, 141
Diamond
dislocations in, 413
irradiation of, 416
Diatomic molecule
electronic spectra of, 134-37
structure of, 122
Diborane
hydroxyl adsorption and, 469
radiolysis of, 94

Dibutyl mercury
electrophilic displacement and, 78
Dichlorobenzene
rearrangement of, 72
Dichroism
of chlorophyll, 510-11
streaming
polymer solutions and, 496
Dielectric constant
ionization and, 37
of liquids, 155-58
polymerization and, 479
Dielectric loss
adsorption and, 454-55
in liquids, 158-63
self-diffusion and, 408
stationary systems and, 197
viscosity and, 160
Dielectric polarization, 149-68
gases and, 152-54
liquids and, 153-58
literature on, 149-50
solids and, 163-66
theory of, 150-52
Diethylzinc
conductance in, 29
Diffusion
in crystals, 407
eddy, 350
flames, 392-93
in fused salts, 285-87
in solids, 407-9
surface, 455
viscosity and, 491
see also Diffusion coefficient; and Self-diffusion
Diffusion coefficient
chromatography and, 351, 360
crystals and, 265-66
dense fluids and, 254
determination of
solid state and, 409
in fused salts, 286-87
irradiation and, 408
magnetic resonance and, 384-85
pressure and, 407
rotational
viscosity and, 160
transition probability and, 236
velocity uncertainty and, 208
Diketocyclobutenediol
acidity of, 80
Dilatometry
on metallic solutions, 444
Dimethylglyoxime
spin resonance and, 381
Dimethyl mercury
decomposition of, 56
Dinitrofluorobenzene
substitution mechanism of, 75-76
Dioctylphalate
chromatographic trailing and, 356
Dioxane
conductance in, 28-29
Diphenyl
steric hindrance in, 143
Diphenylmethylene
reactions of, 81
Diphenylpicrylhydrazyl
proton spectrum of, 382
Dipole moment
of amine salts, 37
of diatomic molecules, 122
hydrogen adsorption and, 463
Dislocation
crystal growth and, 420
lattice defects and, 413-15
whisker growth and, 422
Disproportionation reaction
chemisorption and, 466
radicals and, 48-50
Dissipation-fluctuation relation
transport theory and, 208-18
Distortion coefficient
force constants and, 337
Distribution function
rate of change of, 205-7
Double resonance, 385
Dye
adsorption of, 457
color theory of, 124

E

Elaidate
micelles of, 183
Electric field
solid diffusion and, 409
Electrode
chlorine, 291
graphite, 288
interfaces
dielectric behavior of, 164
liquid-metal, 289
Electrode process
in fused salts, 288-90
Electrolyte
association of, 22-25
conductance and, 21-29
in nonaqueous solvents, 20-40
Electromotive force
fused salts and, 291-92
kinetics and, 310-11
Electron
correlation energy and, 115-16
distribution
force constants and, 341
in flames, 395
impact
radiation and, 87-92
solvated, 33, 35
Electron diffraction
chemisorption and, 467
force constants and, 337
Electron exchange
fast, 323-24
Electronic structure
of molecules
quantum theory and, 107-32
spectroscopy and, 133-48
Electron microscopy
chloroplast structure and, 510
crystal dislocations and, 413
Electron resonance, 369-90
color centers and, 411
irradiated alkanes and, 99
of organic radicals, 381-83
redox reactions and, 323
of transition metal ions, 372-73
see also Magnetic resonance
Electron transport
photosynthesis and, 521
Electrophilic displacement
on carbon, 78
Electrophoresis
surface potential and, 173
Element
adsorption on, 456
chemical shift of, 378
redox reactions of, 324, 325
thermodynamic properties of, 4, 5
Emission spectra
of chlorophyll, 144
of nitrogen, 135
of polyatomic molecules, 137-38
see also Spectra
Emulsion
surface charge and, 173
Energy
of activation
see Activation energy
of adsorption
theory and, 456
transfer
kinetics on, 312
photosynthesis and, 503-9
see also Enthalpy; Free energy; and Heat
Engine
combustion in, 399-400
Enthalpy
of activation
conductance and, 279
of electrolyte association,

37
excess
alcohol solutions and, 441
alloy solutions and, 444
hydrocarbon systems and, 435-36, 440
ignition and, 393
of mixing
lattice theory and, 485
solid solutions and, 445
Entropy
of activation
conductance and, 279
of adsorption
phase transitions and, 459
alloy solutions and, 444
constancy of
irreversible process and, 193-94
decrease of
in macroscopic process, 196
equilibrium approach and, 190
fused-salt systems and, 298
ice formation and, 420
maximum
probability density and, 202
of mixing
polymer solutions and, 481, 485
monolayers and, 179
of solution
chromatography and, 354
rare gases and, 443
time and
monotonicity of, 192-93
Enzyme
of chloroplasts, 520
kinetics on
coordination sphere and, 318
oxygen exchange reactions and, 320
photophosphorylation and, 513
surface charges and, 174-75
Equation of state
of carbon dioxide, 151
for monolayers, 170-71
physical adsorption and, 453-54
for polymer solutions, 481
Equilibrium
approach to
coarse graining and, 190-93
in gases, 236-39
association
conductance and, 22-25
fused salts and, 290-99
ion-pair, 38
liquid-vapor, 433
local, 194-96
microcanonical, 224-25
osmotic pressure and, 489
tabulation of, 8-9
ultracentrifugation and, 487-88
Erythrocyte
spectroscopy on, 309
Ester
chromatography of, 357
hydrolysis of, 174-75, 321-22
inorganic
nucleophilic displacement and, 77
radiolysis of, 101
second virial coefficient and, 429
Etching
dislocations and, 413-14
solid vacancies and, 410
Ethane
adsorption of
transitions and, 458, 459
from ethylene, 466
sound absorption and, 315
thermodynamic properties of, 6
Ethanol
adsorption of
hydrogen bonding and, 469
radiolysis of
in solids, 102
thermodynamic properties of, 6
Ethanolamine
conductance in, 28
Ether
steric hindrance in, 143
thermodynamic properties of, 6
Ethyl bromide
synthesis of
radiation-induced, 94
Ethyl chloroformate
nucleophilic agents on, 76
Ethylene
chemisorption of, 466
radical addition to, 50-51
radiolysis products of, 93
singlet-triplet bonds of, 139
spectra of
adsorption and, 466
Ethylenediamine
conductance in, 29
Ethylenediamine tetraacetic acid
exchange reactions of, 318
Ethylene dichloride
electrolytes in, 37
Ethylene oxide
by nucleophilic reaction, 76
thermal decomposition of, 56
Ethyl ether
thermodynamic properties of, 6
Explosion
constant volume, 395

F

Fast reaction
kinetics of, 307-17
Fatty acid
chromatography of, 357
crystals of, 176
ionization of, 31
micelles of, 183
monolayers of, 179
thermodynamic properties of, 7
Faujasite
adsorption in, 454
Ferricyanide
Hill reaction and, 502, 513
reduction of, 325
Ferrous ion
oxidation of, 325
Film
of chlorophyll
photoconduction and, 508
collapse pressure and, 178
metallic
adsorption on, 456, 463
thin
crystal growth and, 421-22
Flame
chemistry of, 391-406
diffusion-, 392-93
ionization in, 395
laminar, 392
nozzle flow and, 397
spectra in, 136-37
turbulent, 394
unsteady, 395
Flammability limit, 393-94
Flash technique
kinetics and, 316-17
Flavonoid
chromatography of, 361
Flow
in porous media, 350-51
techniques
polymer solutions and, 489-96
Fluctuation-dissipation relation
transport theory and, 208-18
Fluid
dense
theories for, 249-61
Fluoradene
acidity of, 80
Fluorescence

of chlorophyll
energy transfer and, 504, 505-6
kinetics and, 312, 316-17
quantum efficiencies of, 139
redox reactions and, 325
Fluoride
molten
conductance of, 279
decomposition potentials of, 288
Fluorine
spectra of, 135
Fluorobenzene
spin-spin coupling and, 381
Fluorocarbon
critical region and, 429-31
hydrogen bonding and, 442-43
radiolysis of, 100
second virial coefficient and, 428
solutions of, 433-38
theory and, 434
thermodynamic properties of, 6, 7
Fluoromethane
dielectric virial coefficients of, 154
Fluoro radical
hydrogen abstraction and, 47-48
Foam
properties of, 182
stability of, 179
Fokker-Planck equation
transport theory and, 246-49
Force constant
tabulation of, 339
vibration-rotation spectroscopy and, 335-42
Formaldehyde
photolysis of, 46
Schrödinger equation and, 123
spectra of
in flames, 137
interferometry and, 145
Formamide
as chromatographic support, 362
orbital shielding in, 377
Formic acid
acid-base equilibria in, 31
chemisorption of, 466-68
dissociation of, 310
photosensitization of, 60
radiolysis of, 96-97
Free energy
excess
alcohol solutions and, 441
fluorocarbon systems and, 435, 436-37
hydrocarbon systems and, 439-40
hydrogen-deuterium solutions and, 433
of formation
of amide ion, 37
light scattering and, 431
of mixing
polymer solutions and, 483, 486
polar reactions and, 69-72
Free radical
see Radical; and specific radicals
Freon
thermodynamic properties of, 6
Frictional coefficient
expansion of, 258
in fused salts, 286
polymer solutions and, 489-90
transport theory and, 245
Fuel
for rocket engines, 399-400
Furan
adsorbent area and, 451
thermodynamic properties of, 6
Fused salt
chemistry of, 273-306
chromatography and, 363
equilibrium properties of, 290-99
gas chromatography and, 358
reviews on, 275-76
spectroscopy on, 294-97
theory of, 297-99
transport properties of, 276-90

G

Gallium trichloride
molten
properties of, 277
Gas
Boltzmann equation and, 229-34
chromatography, 459-61
dielectric behavior of, 152-54
ignition of, 393
laminar flames in, 392
in liquid, 443-44
second virial coefficient and, 429
master equation and, 234-36
mixtures of, 427-29
radiation and, 87-95
reactions of, 41-64
halogen atom, 44-45
molecular, 55-57
nitrogenation, 46
oxygen atom, 46
radical, 46-55
theory of, 41-44
unimolecular, 41-43
transport theory and, 229-39
see also Inert gas; and specific gases
Gaussian distribution
chromatographic zones and, 352-53
Germanium
dislocations in, 413
irradiation of, 416
Glass
as chromatographic support, 362
Glucose
mutarotation of, 320
photosynthesis of, 519, 522
Glycerol
chromatographic tailing and, 356
conductance and, 25
dielectric relaxation of, 161
Glycine
spin resonance and, 381-82
Glycol
viscoelastic relaxation of, 161
Gold
chromatographic tailing and, 356
dislocations in, 413
irradiation of, 416
whiskers of, 422
Graphite
adsorption and, 456
surface properties of, 450-52
water proton resonance and, 378
whiskers of, 422

H

Hafnium
oxidation of, 418
Halide
conductance of, 22
electron capture and, 89
molten
conductance of, 279-80
Raman spectra of, 295-96
surface tension of, 294
photolysis of, 141
quadrupole resonance in, 369, 371, 373-74
thermodynamic properties of, 4, 5
see also Alkali halide; Alkaline earth halide; Alkyl halide;

and specific halides
Haloform
alkoxide ions and, 81-82
see also Chloroform
Halogen
in chlorofluorocarbons, 438
electron impact and, 89
in fused salts
spectroscopy and, 295
gaseous reactions of, 44-45
radiolysis of, 97
ultraviolet spectroscopy on, 135
see also specific halogens
Halogenation
gaseous, 44-45
heats of, 9
of norbornane, 68-69
solvent effects on, 68
Heat
of adsorption
lattice spacing and, 464
aerodynamics and, 396
of association
of chloroform mixtures, 429
of desorption, 456
of formation
of hydrocarbons, 9-10
of immersion
solid in liquid, 180
of mixing
of hydrocarbons, 440
properties
of molten salts, 290-91
of reaction
tabulation of, 8-9
of solution
chromatography and, 354-55
rare gases and, 443
of silicates, 180
of sublimation
quadrupole moments and, 151-52
of transport
self-diffusion and, 268-69
of vaporization
chromatography and, 355
see also Enthalpy; Heat capacity; and Specific heat
Heat capacity
critical region and, 429-30
Heat flux
expression for, 217-18
Fokker-Planck equation and, 248
Helium
diffusion constant of, 384
ground state energy of
errors of, 117
spin-orbitals and, 118
structure of
quantum theory and, 119
thermodynamic properties of, 4
Hemoglobin
spectroscopy on, 309
Heptane
radiolysis of, 100
Heterocyclic compound
quadrupole resonance of, 370
spectra of, 141-42
spin-spin coupling and, 380-81
Heterogeneous reaction
in solids, 417-19
Hexane
radiolysis products of, 92-93
thermodynamic properties of, 6
Hill reaction
chemistry of, 511-16
chloroplast and, 502
radicals and, 509
Homogeneous reaction
in solids, 419
Hydrazoic acid
radiolysis of, 94
Hydride
gaseous
polarizability and, 343-44
heat of formation of, 461
spectra of, 135-36
see also specific hydrides
Hydride ion
transfer of, 91
Hydride radical
structure of, 122
Hydrocarbon
critical region and, 429-31
electronic structure of, 123-24, 125
halogenation of, 44-45
heat of formation of, 9-10
radiolysis of, 92-94, 99-100
Raman spectroscopy and, 343
second virial coefficient and, 428
self-diffusion of, 384-85
solutions of, 438-41
thermodynamic properties of, 6-7
see also Alkane; Aromatic compound; Cyclic compound; Olefin; and specific hydrocarbons
Hydrochloric acid
conductance of, 28, 30, 32
Hydrodynamic property
of polymer solutions, 489-96
Hydrogen
abstraction of
by halogens, 44-45
methylene reactions and, 83
by radicals, 46-48
chemisorption of, 461-65
chromatography of, 459-60
and deuterium mixtures, 433
exchange reactions of
kinetics on, 320
heat of adsorption of, 456
iodine and, 56-57
irradiation of, 416
isotopes of
spectra of, 134
in liquids
second virial coefficient and, 429
negative molecule ion of
states of, 121
partial molal volume of, 443
photosynthetic pathway of, 523-24
radiolysis of
in organic liquids, 101
spin-orbitals and, 118
spin resonance of, 383
structure of
quantum theory and, 121
thermodynamic properties of, 4
Hydrogenation
catalysis of
mercury and, 463-64
heats of, 9
radicals and, 48-49
spin resonance and, 383
Hydrogen bond
chromatography and, 357
dielectric relaxation and, 165-66
in nonaqueous solutions, 442-43
proton shielding and, 377
sound absorption and, 315
spectroscopy and, 142
theory of, 124
Hydrogen cyanide
dielectric polarization and, 158
excited states of, 123
radiolysis of, 94
Hydrogen-deuterium exchange
radiation-induced, 92
Hydrogen fluoride
dielectric polarization and, 158
spectra of, 136

structure of, 122
Hydrogen halide
electron capture and, 89
Hydrogen ion
mobility of, 32
see also pH
Hydrogen peroxide
photolysis of, 98
Hydrolysis
at interfaces, 174-75
kinetics on, 320-22
Hydroxide ion
color centers and, 412
mobility of, 32
in molten salts, 291
Hydroxyl group
chemisorption of, 468-70
Hyperconjugation
theory of, 125
Hysteresis
adsorption and, 458

I

Ice
dielectric constants of, 164
irradiation of, 416
nucleation and, 420
proton transfer in, 311, 321
Ignition
of premixed gases, 393
Imidazole
catalysis by, 76
Imido radical
spectra of, 136
Indium oxide
precipitation of, 420
Inert gas
dielectric virial coefficients and, 153
in fused salts
solubility and, 293
heats of solution of, 443
molecular cross-sectional areas and, 450-51
Infrared spectroscopy, 335-46
chemisorption and, 465-70
see also Spectra; and Spectroscopy
Inorganic compound
heats of reaction of, 8, 9
redox reactions of, 323-24, 325-26
substitution reactions of, 317-19
thermodynamic properties of, 4-5
Inorganic ion
chromatography of, 361
Interface
reactions at, 174-75
Interferometry
spectroscopy and, 145
Iodate ion
conductance of, 25
Iodide
conductance of, 27
quadrupole resonance of, 373-74
tetrathionate and, 326
Iodine
in chlorofluorocarbons, 438
electron impact and, 89
hydrogen and, 56-57
iodide and
kinetics and, 313-14
to styrene, 65-66
Iodobenzene dichloride
reactions of, 71-72
Ion exchange resin
as chromatographic support, 362
Ionization
in flames, 395
in nonaqueous solvents, 29-32, 37
potential
charge-transfer spectra and, 140
of fluorocarbons, 437
of gas mixtures, 428
Ion-molecule reaction
gases and, 87-95
negative, 92
Iron
sulfiding of, 419
wave function for, 120
whiskers of, 422
Iron carbonyl
force constants of, 340
Irreversible process
equilibrium approach and, 190-93
in gases, 236-39
Isobutene
polymerization of
radiation-induced, 103
Isocyanato radical
spectra of, 138
Isomerization
chromatography and, 363
of dichlorobenzene, 72
Isotherm
adsorption, 453-54
chromatography and, 353
Isothiocyano radical
spectra of, 138
Isotope
adsorption kinetics and, 464, 466-67
in fused salt
transference numbers and, 285
glucose biosynthesis and, 519, 522
photosynthesis and, 522-25
vibration-rotation spectroscopy and, 342

K

Kaolinite
adsorption on, 456
Ketene
thermal decomposition of, 56
Ketone
dielectric loss of
in solids, 165
electronic structure of, 125
photolysis of, 57-58, 59
photosensitization of, 60
Kinetics
of adsorption
of formic acid, 467-68
of hydrogen, 463, 464
at liquid interfaces, 181-82
chromatography and, 351-52
combustion and, 391-400
completion methods, 309-14
of electrode processes
in fused salts, 288-90
on heating
aerodynamics and, 396
of Hill reaction, 515-16, 518
of hydrogen abstraction, 46-48
mixing techniques, 308-9
on molecular gas reactions, 55-57
perturbation methods and, 314-17
on photodecompositions, 57-59
on photophosphorylation, 516-18
of photosynthesis
wavelength and, 523
on propellant reactions, 397-98
on protolytic reactions, 320-21
on radical reactions, 46-55
reaction mechanisms and, 317-27
solid state and, 417-20
on solutions, 307-34
Kirkwood theory
of transport, 203-8
Knight shift
metal nuclei and, 374-75
Krypton
adsorption of
surface area and, 450
transitions and, 458

solubility of, 444
wave function for, 120
Krypton-argon system
temperature and, 432-33

L

Lattice
defect
dipole orientation and, 164-65
radiation damage and, 415-17
solid state and, 409-15
ionic
chemisorption and, 464
see also Crystal
Lead
self-diffusion in, 267
thermodynamics on, 445
Lecithin
hydrolysis of, 174-75
Light scattering
critical region and, 431-32
developments in, 427
flow birefringence and, 495
polymer configuration and, 479-80
polymerization and, 497
virial coefficients and, 486-87
Lipid
photosynthesis of, 523
Lipoprotein
structure of, 176
Liquid
dielectric constants of, 155-58
dielectric loss in, 158-63
fuel, 399-400
gases in, 443-44
second virial coefficient and, 429
hard sphere, 239-46
interfaces
adsorption at, 181-83
mixtures of, 432-43
organic
radiation chemistry of, 98-101
self-diffusion of
spin echoes and, 384-85
transport theory and, 239-64
Lithium
conductance of, 36
in methylamine, 34
nuclear resonance and, 375, 376
polarizability of, 120
self-diffusion in, 267
wave function for, 117
Lithium fluoride
whiskers of, 422
Lithium hydride
magnetic resonances of, 374
structure of, 122
Lithium salt
in acetic acid, 37
Luminescence
of chloroplasts, 507-8
irradiation of solids and, 101

M

Magnetic resonance, 369-90
of alkali halides, 373-74
on chloroplasts, 507-8, 509
kinetics on, 312-14
nuclear quadrupole couplings, 369-71
relaxation times and, 383-85
theory of, 125
of transition metal ions, 372-73
see also Electron resonance; Nuclear resonance
Malonic acid
resonance and, 381
Manganese
photosynthesis and, 515
Mass spectrometry
vacuum ultraviolet and, 137
Master equation
gas transport and, 234-36
nonequilibrium processes and, 196-99
Mayer's theorem
transport theory and, 199-203
Membrane
for osmotic pressure, 488-89
permeability and, 175-76
Menadione
photoreduction of
chlorophyll and, 504
Mercury
in butane, 429
hydrogen desorption and, 463-64
nuclear resonance in, 384
photosensitized reactions and, 59-60
Mercury dimethyl
decomposition of, 56
Metal
diffusion in, 409
films
adsorption and, 456, 463
irradiation of, 416
in molten salts
conductance and, 282
solubility of, 292
nuclear resonance in, 374-76
properties of
adsorption and, 180-81
solutions of, 32-36, 444-45
thermodynamic properties of, 4, 5
see also Alkali metal; Alkaline earth metal; Noble metal; Transition metal; and specific metals
Metal ion
complexes of
exchange reactions of, 317-19
redox reactions of, 323
see also specific ions
Methane
adsorption of
transitions and, 458
electron impact and, 90
partition coefficient of
chromatography and, 355
protonated
valence bond and, 124
pyrolysis of, 56
radiolysis of, 94
at low temperatures, 102
in organic liquids, 101
thermodynamic properties of, 6
Methanol
adsorption of
hydrogen bonding and, 468
radiolysis of, 100-1
in solids, 102
thermodynamic properties of, 6
Methoxyl radical
hydrogen abstraction and, 48
Methylallyl radical
methylene reactions and, 52
Methylamine
as metal solvent, 34, 35-36
Methylene
formation of, 82
reactions of, 81-83
Methylene radical
to olefins, 50-51
spectrum of, 138
Methyl methacrylate
radiolysis of, 100
Methyl radical
deuterium exchange in, 53
nitric oxides and, 53-54
oxidation of, 55
spin resonance of, 383
Micelle
detergents and, 182-83
formation
neutralization rates and, 81

Molecular chaos
Boltzmann derivation and, 229-34
Molecular electronic spectroscopy, 133-48
reviews on, 133-34
Molecular integral
calculation of, 122-23
Molecular orbital theory
conjugated systems and, 124
Molecular weight
osmotic pressure and, 489
of polyethylene, 497
of polymers
virial coefficient and, 482-84, 489
ultracentrifugation and, 487-88
viscosity and, 491, 494, 496
Momentum
of molecules
in dense fluids, 253-54
Monolayer
colloid structure and, 178-79
equation of state of, 170-71
Motion
equation of, 209, 246
acoustic waves and, 261
Mutarotation
oxygen exchange and, 320

N

Naphthalene
electron exchange and, 323
electronic structure of, 125
phosphorescence of, 139
spectra of
crystals and, 143
at low temperatures, 139
thermodynamic properties of, 7
Neodymium
in fused salts
solubility of, 292
Neon
wave function for, 120, 121
Neopentane
electron impact and, 90
Raman spectroscopy and, 343
Neophyl radical
rearrangement of, 65
Neptunium
redox reactions of, 324, 325
Neutralization
kinetics on, 320-21
Nickel
irradiation of, 416
oxidation of, 418-19
Nickel carbonyl
force constants of, 340
Niobium
oxidation of, 418
Nitrate
crystals of
spectra of, 143-44
molten
conductance of, 280-81
diffusion in, 285, 286
Raman spectra of, 296
surface tension of, 294
thermal conductivity of, 287
transport numbers for, 283-84
x-ray diffraction on, 296
Nitration
kinetics on, 72-73
Nitric acid
conductance of, 29-30
synthesis of
radiation-induced, 94
Nitric oxide
adsorption of, 457
alkane radiolysis and, 93
ammonia photolysis and, 54
chemiluminescence of, 135
methyl radical and, 53-54
as scavenger, 89
Nitroaniline
rearrangement of, 72
Nitrobenzene
thermodynamic properties of, 6
Nitrogen
adsorption of
surface area and, 450-51
excited states of, 123
fixation of
radiation-induced, 94
gaseous reactions of, 46
heat of adsorption of, 456
ion-molecule reactions of, 91-92
in liquid ozone, 433
in liquids
second virial coefficient and, 429
oxides of
radical reactions and, 53-54
see also specific oxides
quadrupole resonance of, 370
spectroscopy on, 134-35
thermodynamic properties of, 4
Nitrogen dioxide
excitation of, 57
spectroscopy on, 137
Nitrogen tetroxide
conductance of, 27
Nitronium ion
nitrations and, 72-73
Nitrosomethane
nitric oxide and, 54
Nitrous acid
ammonia and, 326
Nitrous oxide
ethane and, 54
force constants of, 337
in liquid oxygen, 433
synthesis of
radiation-induced, 94
Noble gas
see Inert gas
Noble metal
surface potential differences of, 462-63
vacancies in, 410
see also specific metals
Nonaqueous solution
exchange reactions in, 319-20
Nonelectrolyte
solutions of, 427-28
Nonresonant absorption
of polar gases, 152-53
Norbornane
halogenation of, 68-69
Nose cone
heat transfer and, 396
Nozzle flow
propellants and, 397
Nuclear recoil
chemical effects of, 417
Nuclear resonance, 369-90
in metals, 374-76
metal solutions and, 34
on molten salts, 296
physical adsorption and, 454, 455
protolysis kinetics and, 32
of water, 385
Nucleation
kinetics on, 419-20
Nucleic acid
deuterium and, 524
proton shielding and, 378
Nucleophilic displacement
on carbon atoms, 74-76
on noncarbon atoms, 76-78

O

Octane
thermodynamic properties of, 6
Oleate
micelles of, 183
Olefin
bromination of
kinetics on, 311
mercury sensitization and, 59
methylene radical and, 50-51
oxygenation of, 46
radicals from, 48
radiolysis of, 100
singlet-triplet bonds of, 139

Opalescence
critical, 427
critical region and, 432
Optical pumping, 385
Orbital
natural spin, 117-18
self-consistent-field, 118-19
Organic compound
exchange reactions of, 320
irradiation of
solid state and, 416
redox reactions of, 326
thermodynamic properties of, 6-7
see also Alkane; Aromatic compound; Cyclic compound; Heterocyclic compound; and specific compounds
Organic ion
spectra of, 141
Organic liquid
radiation chemistry of, 98-101
Organic radical
see Radical; and specific radicals
Organic reaction
physical chemistry of, 65-86
Organometallic compound
thermodynamic properties of, 7
Osmotic pressure
on comcentrated solutions, 485-86
critical region and, 431
membranes and, 488-89
Oxalic acid
oxidation of, 326
Oxidation
corrosion and, 417-18
with radicals
low temperatures and, 54-55
Oxidation-reduction reaction
in fused salts, 275
kinetics on, 322-27
photosynthesis and, 513-15
Oxide
of alkaline earths
spectra of, 136
crystal growth of, 421
molten
conductance of, 281
stability of, 275
of sulfur
photolysis of, 136
whisker growth and, 422
see also specific oxides
Oxygen
dissociation of, 56
electron impact and, 89
exchange of
in inorganic reactions, 319
in organic reactions, 320
gaseous reactions of, 46
liquid
miscibility of, 433
photosynthetic pathway of, 524-25
radical reactions and, 55
radiolysis of, 94
spin resonance of, 383
thermodynamic properties of, 4
in upper atmosphere, 135
wave function for, 120
Ozone
excited states of, 123
liquid
miscibility of, 433
Ozone fluoride
properties of, 433

P

Paracyclophane
electron exchange in, 382
Paraffin
thermodynamic properties of, 7
Paramagnetism
of metals in solution, 33, 35
solvation spectra and, 141
see also Electron resonance; Magnetic resonance; Nuclear resonance
Partition coefficient
chromatography and, 353-54, 355
Pentane
adsorption isotherms of, 454
radiolysis of, 99
second virial coefficient and, 428
Peptide
chromatography of, 361
Perchloric acid
conductance of, 32
Perester
decomposition of, 66-67
Permanganate
oxidation by, 323, 324, 326
spin resonance of, 144
Permeability
colloid structure and, 175-76
osmotic pressure of polymers and, 488-89
Peroxide
decomposition of, 66-67
Perturbation theory, 109
pH
chromatography and, 363
protolysis kinetics and, 378
Phase diagram
aqueous alcohol systems and, 442
hydrocarbon systems and, 440
of metallic solutions, 444
Phase equilibrium
polymer systems and, 486
Phase transition
adsorption and, 458-59
Phenanthrene
phosphorescence of, 139
Phenol
adsorption of, 459
adsorbent area and, 451
chromatography of, 357
hydrogen bonding and, 377
Phosphoglyceric acid
photosynthetic routes and, 522, 525
Phosphorescence
of acetone, 102
quantum efficiencies of, 139
Phosphorus
in silicon
magnetic resonance and, 384
Phosphorus oxychloride
conductance in, 25-26
Phosphorylation
photosynthetic, 502-3, 516-18
Photochemistry
chloroplast systems and, 503-9
gaseous reactions and, 57-60
Photoconductance
photosynthesis and, 508
Photoionization, 137
products from, 89
Photolysis
of halogens, 45
kinetics and, 316
of water
photosynthesis and, 502, 509, 512-16
see also Flash technique
Photophosphorylation
chloroplast and, 502-3, 516-18
in chromatophores, 518-19
Photoreduction
kinetics on, 324-25
Photosensitization
mercury and, 59-60
Photosynthesis, 501-30
biochemistry of, 522-25
chloroplast structure and, 509-21
energy transfer and, 503-9
kinetics on, 317
solid state and, 507-9
synopsis of, 501-3

Phycobilin
fluorescence of, 504
Physical interaction
adsorption and, 455-58
Physical organic chemistry, 65-86
Plastic
irradiation of, 101-2
Plate height
chromatography and, 352-53
Plutonium
in mercury, 444
redox reactions of, 324, 325
Poincaré cycle
estimation of, 188-90
Point defect
observation of, 409
Polarization
dielectric, 149-68
fluorocarbon solutions and, 437
of helium-like ions, 120
nuclear, 383-85
of phosphorescence, 139
Raman intensities and, 343-44
Polar molecule
chromatographic resolution and, 356-57
dielectric behavior of, 152-54
Polarography
kinetics and, 309-310
of molten salts, 289-90
Polar reaction
physical chemistry of, 69-81
Polyatomic molecule
emission spectra of, 137-38
structure of, 123-24
Polybutadiene
irradiation of, 102
Polyelectrolyte
dielectric relaxation and, 162
Polyene
spectra of, 141
spin-spin coupling and, 380
Polyethylene
configuration of, 479
irradiation of, 102
molecular weight of, 497
thermodynamic properties of, 6
Polyisobutylene
concentrated solutions of, 485-86
viscometry on, 492
Polymer
branched
hydrodynamic properties of, 491
configuration of, 477-81
crystallinity and, 102
dielectric dispersion of, 162-63
flow birefringence and, 495
light scattering and, 486-87, 495
osmotic pressure and, 485-86, 488-89
radiation chemistry of, 101-3
rheological properties of, 489-96
solutions of, 477-500
stereoregular, 496-97
thermodynamic properties of, 7, 481-89
ultracentrifugation and, 487-88, 494-95
viscoelastic relaxation of, 161
viscometry and, 490-94
Polymerization
chromatography and, 359
hydrolytic, 321
light scattering and, 497
Polymethyl methacrylate
viscometry on, 494
Polypeptide
dielectric dispersion of, 162
structure of, 177
Polypropylene
isotactic 496
Polystyrene
concentrated solutions of, 485
isotactic, 496
light scattering by, 480-81
radiation resistance of, 100
viscometry on, 493, 494
Pore structure
adsorbent properties and, 451-52
chemisorption and, 467
of chromatographic supports, 354, 356
Potassium
conductance of, 36
solvation of, 33
Potassium chloride
color centers in, 412
Potassium halide
conductance of, 28
Potassium hydroxide
conductance of, 28
Potassium iodate
conductance of, 25
Precipitation
kinetics on, 419-20
Pressure
charge-transfer spectra and, 140
collapse
of films, 178
kinetics and, 314
spectroscopy and, 142
transport in crystals and, 266-67
Propane
methylene attack on, 83
thermodynamic properties of, 6
see also Cyclopropane
Propanol
dielectric relaxation of, 161
Propellant
burning of
droplets and, 393, 398-99
solids and, 397-98
Propyl radical
hydrogen abstraction and, 48
Protein
chloroplast activity and, 514-15
dielectric relaxation of, 160
fluorescence of, 144
interfaces and, 174-75
photosynthesis of, 523
Protolytic reaction
kinetics on, 312-13, 320-21
Proton
chemical shift of
magnetic resonance of, 376-78
Pseudorotation
cyclopentane and, 11
Pyridine
phototropic properties of, 144-45
in platinum complexes, 319
thermodynamic properties of, 7
Pyrrole
thermodynamic properties of, 7

Q

Quadrupole moment
measurements of, 151-52
Quadrupole resonance, 369-71
in metals, 375-76
Quantum theory
applications
to atoms, 119-21
to molecules, 121-26
dielectric polarization and, 150-52
general, 107-13
many-electron, 113-19
of molecular electronic structure, 107-32
Poincaré recurrence and, 189-90
Quantum yield
of chloroplast lumines-

cence, 507
for chromium complex exchange, 319
of dissociations kinetics and, 311-12
Quartz
chemisorption and, 469
crystal growth of, 421
Quaternary ammonium salt conductance and, 23-25
Quaternary system
colloid structures and, 177-78
Quinol compound
dielectric relaxation in, 165
Quinone
chloroplast activity and, 514
photoreduction of chlorophyll and, 504

R

Radial distribution function
molten salts and, 297
polymer solutions and, 483
Radiation
adsorbent properties and, 452
aqueous solutions and, 95-98
chemistry and, 87-106
chromatographic zones and, 353
of crystals
magnetic resonances and, 374
gases and, 87-95
organic liquids and, 98-101
platinum exchange and, 318
polymers and, 101-3
solid state and, 101-3
lattice defects, 415-17
water and, 95-98
Radical
addition reactions of, 50-51
benzene arylation and, 65
chemiluminescence and, 53
combination reactions of, 48-50
decomposition reactions of, 51-53
disproportionation reactions of, 48-50
hydrogen abstraction by, 46-48
kinetics and, 308-9
nitrogen oxides and, 53-54
organic liquids and, 99-101
oxidations
at low temperatures, 54-55
from peroxide decompositions, 67
photosynthesis and, 509
in polymer solids, 102
quantum theory and, 122
reviews on, 133-34
in solid state
diffusion and, 409
in solution, 65-69
solvent effects and, 67-68
spectra of, 138
spin resonance of, 381-83
stereochemistry of, 68-69
Radioisotope
adsorbent area and, 451
chromatography and, 362
zone profiles, 353
in fused oxides
electrolytic mobility and, 285
in fused salts
diffusion of, 287
photosynthesis and, 522-25
Radiolysis
in gases, 87-95
in organic liquids, 98-101
polymers and, 101-3
in solids, 101-3
in water, 95-98
Raman spectroscopy
on fused salts, 295-96
intensities, 343-44
Rare earth compound
thermodynamic properties of, 4
Rare earth halide
conductance of, 279
Rare gas
see Inert gas
Rearrangement reaction
of aromatic compounds, 72-73
electron impact and, 90
methylenes and, 81-82
in solid state, 419
Redox reaction
kinetics on, 322-27
photosynthesis and, 513-16
Refractive index
of hydrocarbon solutions, 439
Relaxation method
kinetics and, 314-17
Resin
as chromatographic support, 362
Resonance
burning, 400
conjugated systems and, 125
malonic acid and, 381
see also Double resonance; Electron resonance; Magnetic resonance; Nuclear resonance
Retention ratio
chromatography and, 354-55
Reversibility
mechanical
thermodynamics and, 199-203
Rheology
of polymer solutions, 489-96
Ribulose diphosphate
carbon fixation and, 522
Rocket
engines
fuels for, 399-400
Rotation
hindered
hydrogen adsorption and, 461
polymer configuration and, 479
spectroscopy, 335-46
Rotational diffusion constant
viscosity and, 160
Rubber
as chromatographic support, 362
flow properties of, 492-93

S

Salt
density of, 293
fused
chemistry of, 273-306
see also specific salts
Sapphire
irradiation of, 416
Scandium
polarizability of, 120
Scattering theory
for intermolecular collisions, 125
Sedimentation
polymer solutions and, 494-95
Self-diffusion
in crystals, 264-69
definition of, 263-64
Semicarbazide
oxidation of, 326
Semiconductor
chemisorption and, 464
chlorophyll and, 507-8
crystal growth of, 421
fused salts and, 277
interdiffusion in, 408
precipitation in, 419
sulfides and, 281
Semiquinone
flash techniques on, 317
Shock tube
spectroscopy and, 136-37
Shock wave
kinetics and, 314
Silane
solubilities of, 444

Silanol group
spectra of, 468
Silica gel
adsorption on, 457
hydrogen bonding and, 468-69
pore size and, 452, 467
in chromatography, 354
Silicate
crystal growth of, 421
molten
conductance of, 281-82
surface energy of, 180
Silicic acid
as chromatographic support, 362
Silicon
diffusion in, 409
nucleophilic displacement on, 77-78
relaxation times of, 384
thermodynamic properties of, 5
whiskers of, 422
Silicon dioxide
adsorption and, 457
chemisorption and, 469
molten
x-ray diffraction on, 296
Silicone oil
chromatographic tailing and, 356
Silver
chromatographic tailing and, 356
self-diffusion in, 409
wave function for, 120
whiskers of, 422
Silver bromide
self-diffusion in, 269
Silver nitrate
fused
viscosity of, 277
Singlet-triplet transition
spectroscopy and, 139-40
Soap
micelles of, 183
phase transitions of, 182
structure of, 175-76
Sodium
in ammonia, 141
self-diffusion in, 267
solvation of, 33, 34
wave function for, 121
Sodium iodide
in nonaqueous solution, 36
Sodium ion
in fused salt
diffusion of, 285-86
Solid
dielectric behavior of, 162-66
diffusion in, 407-9
fuel, 400
lattice defects in, 409-15
radiation chemistry and, 101-3
radiation damage in, 415-17
reactions of, 415-20
solutions, 444-45
surface energy of
contact angle and, 179-81
Solid state
chemistry of, 407-26
crystal growth and, 420-22
photosynthesis and, 507-9
reactions in, 417-20
Solubility
benzene-hydrocarbon systems and, 440
fluorocarbon systems and, 434
in fused salts, 292-93
of gases, 443-44
in liquid ozone, 433
products
in fused salts, 290
stereoconfiguration and, 496
temperature and, 433
Solution
of alcohols, 441-42
aqueous
proton shielding and, 377
radiation chemistry of, 95-98
thermodynamics on, 442
of chlorofluorocarbons, 437-38
critical region and, 429-32
dielectric constants of, 155-58
dielectric loss in, 158-63
of electrolytes, 20-40
of fluorocarbons, 433-38
of gases, 427-29
gas in liquid, 443-44
of hydrocarbons, 438-41
ideal, 440, 441
kinetics on, 307-34
of liquids, 432-43, 444
at low temperature, 432-33
of metals, 32-36, 444-45
nonaqueous
exchange reactions in, 319-20
of nonelectrolytes, 427-48
of polymers, 477-500
Solvation spectra
iodide ions and, 140-41
Solvent efficiency
chromatography and, 349
Solvent-solute interaction
chromatography and, 356-58, 362-63
polymers and, 483
proton shielding and, 377-78
Solvolytic reaction
kinetics on, 70, 320-22
Specific heat
of benzene, 451
Spectra
action
photosynthesis and, 513
adsorption and
of carbon dioxide, 465
of ethane, 466
of formic acid, 467
of hydroxyl groups, 468
atomic
theory of, 120-21
of carbonium ions, 73
charge-transfer, 140-41
of chlorophyll
chromatic states and, 505-7
emission, 144
of conjugated systems, 124
emission
of chlorophyll, 144
of nitrogen, 135
of polyatomic molecules, 137-38
of metal solutions, 34-35
molecular-electronic, 133-48
singlet-triplet transitions and, 139-40
solvation, 140-41
triplet-triplet, 139-40
Spectroscopy
chromatography and, 357-58
on fused salts, 294-96
infrared, 335-46, 465-70
interferometry and, 145
irradiation of solids and, 101-3
magnetic resonance and, 369-90
micro
kinetics and, 308
molecular electronic, 133-48
pressure and, 142
Raman, 295-96, 343-44
ultraviolet, 294-95, 496
vacuum, 135, 137
vibration-rotation, 335-46
visible, 294-95, 469
Spin
angular momenta and, 114-15
Spin-echo
kinetics and, 314
Spin Hamiltonian
constants of, 372
Spin-orbital

natural, 117-18
Spin resonance
see Magnetic resonance
Spin-spin coupling
nuclear, 378-81
table of, 379
Starch
photosynthesis of, 519-20
State
macroscopic description of, 191-92
stationary
approach to, 197
see also Corresponding state; Equation of state; Solid state
Statistical mechanics
Boltzmann equation and, 229-34
nonequilibrium systems and, 196-97
perturbations and, 219
transport theory and, 187-272
Stearic acid
monolayers of, 178
Steel
crystal growth of, 421
Stereochemistry
chromatography and, 363
electrophilic displacement and, 78
polymer properties and, 496-97
of radicals, 68-69
Steric hindrance
spectroscopy and, 143
Steroid
chromatography of, 362
spectra of, 144
Streaming dichroism
polymer solutions and, 496
Stress tensor
expression for, 217-18
Fokker-Planck equation and, 248
Styrene
polymerization of, 65, 66
radiation-induced, 103
radiolysis of, 100
Substitution reaction
on benzene, 70-71
kinetics on, 317-20
Succinic acid
thermodynamic properties of, 7
Sulfate
reduction of, 325
Sulfide
formation of, 419
molten
conductance of, 281
Sulfite
hydrolysis of, 77
Sulfolane
see Tetramethylene sulfone
Sulfur
in fused salts
spectroscopy and, 295
thermodynamic properties of, 4
Sulfur dioxide
adsorption of, 458
charge-transfer spectra and, 140
exchange reactions in, 319-20
Sulfuric acid
conductance of, 29-30
nitroanilines and, 81
water radiolysis and, 97-98
Superconductance
nuclear resonance and, 374-75, 376
Supersonic flow
chemical reactions in, 394
Surface
ablation
aerodynamics and, 396
area
of adsorbents, 450-51
chemistry of, 449-76
energy
contact angle and, 179-81
literature on, 449-50
potential
adsorption and, 462-63
colloids and, 171-75
Surface tension
of fused salts, 293-94
measurement of, 181
Surfactant
structure of solutions of, 182

T

Tannin
chromatography of, 361
Tantalum
oxidation of, 418
Temperature
chromatography and, 358-59, 361
dielectric relaxation and, 161
fluorescence and, 312
in fused salts
conductance and, 278-79
spectroscopy and, 294-95
high
kinetics and, 400
light scattering and, 432
liquid solutions and, 432-33
second virial coefficient and, 428, 484
Ternary system
calorimetry on, 440
colloid structures and, 177
metallic, 444
temperature and, 433
vapor pressure on, 441
Terpenoid
spectra of, 144
Terphenyl
chromatography of, 358
Tetraalkylammonium ion
conductance and, 23-25
sodium metal and, 66
Tetracyanoethylene
charge-transfer spectra and, 140
Tetralin
emission spectra of, 138
Tetramethylene sulfone
conductance in, 27-28
Tetramethyllead
thermodynamic properties of, 7
Tetrathionate
iodide and, 326
Tetrazine
transitions of, 141
Thallium halide
molten
magnetic resonance on, 296
Thallous chloride
molten
diffusion in, 285
Thermal conductivity
see Conductance, thermal
Thermochemistry, 1-20
flames and, 395
techniques of, 11-12
Thermodynamic property
of fused-salt system, 290-99
of inorganic compounds, 4-5
of organic compounds, 6-7
of substances, 1-20
see also specific functions
Thermodynamics
chromatography and, 353-56, 361-62
gas chromatography and, 460
nonelectrolyte solutions and, 427-45
on polymer solutions, 481-89
Thermoluminescence
of chloroplasts, 508
Thiocyanate
conductance of, 27
Thionine
photoreduction of, 324-25
Thionyltrifluoroacetone
metal complexing of, 318-19
Thiophene
thermodynamic properties

of, 7
Thixotropy
polymer solutions and, 492
Tin
in lead, 445
Titanium
oxidation of, 418
Titration
in fused salts, 290
Toluene
emission spectra of, 138
radiolysis of, 101
Toluic acid
oxidation of, 326
Transference number
measurement of, 284-85
Transition
n-π, 141-42
Transition metal
electron resonance of, 372-73
surface potential differences of, 462-63
see also specific metals
Transition probability
calculation of, 136
gases and, 234-36
time dependence of, 219
Transport
coarse graining and, 190-93
in combustion, 391
in crystals
self-diffusion and, 264-69
in dense fluids, 249-61
fundamental concepts, 188-229
in fused salts, 276-90
in gases, 229-39
in liquids, 239-64
photosynthesis and, 503-9, 521
statistical mechanics of, 187-272
theories of, 203-27
relationships between, 227-29
Transport number
fused salts and, 283-85
Triazine
photosynthesis and, 515
Tricresyl phosphate
chromatographic tailing and, 356
Triethylamine
conductance of, 26
Triphenylamine radical
formation of, 316
Triphosphopyridine nucleotide
chlorophyll hydrogen and, 524
photoreduction of chloroplasts and, 513
photosynthesis and, 516-18
Triplet state
of chlorophyll, 504
of naphthalene, 139
of nitrogen, 134
spin resonance and, 383
Triplet-triplet spectra, 139-40
Tritium
chromatography of, 460
photosynthesis and, 523-24
structure of, 123
Tropylium ion
electron impact and, 90
methylene reactions and, 82
Trypsin
spectra of
structure and, 144
Tryptophan
fluorescence of, 144
Tungsten
crystal growth of, 421
Tyrosine
fluorescence of, 144

U

Ultracentrifugation
on polymer solutions
equilibrium measurements and, 487-88
velocity methods and, 494-95
Ultrasound
absorption of
in electrolyte solutions, 37
fused salts and, 298
kinetics and, 314-16
Ultraviolet spectroscopy
chemisorption and, 469
on fused salts, 294-95
vacuum
on halogens, 135
mass spectrometry and, 137
Unimolecular reaction
electron impact and, 88
theory of, 41-43
Uranium
redox reactions of, 324, 325
Urea
derivatives
chloroplast activity and, 515
dielectric relaxation in, 165
quadrupole resonance of, 370

V

Vacancy
radiation damage and, 415-17
in solids, 409-11
Valence
force fields and, 337-38
Valine
ionization of, 31
Vanadium
wave function for, 120
Van der Waals equation
adsorption and, 454
Van der Waals force
heat of adsorption and, 465
spin-orbitals and, 118
theory of, 124
Vapor pressure
chromatography and, 355
fluorocarbon solutions and, 435-36, 438
metallic solutions and, 444
on molten systems, 290
Vibration-rotation spectroscopy, 335-46
force constants and, 335-42
isotopes and, 342
Raman intensities and, 343-44
Violaxanthin
photosynthesis and, 524-25
Virial coefficient
adsorption and, 453
dielectric, 153-54
fluorocarbons and, 434
gas mixtures and, 427-29
isotactic chains and, 496-97
for liquids
transport theory and, 241, 243
molecular weight and, 482-84, 489
polymer solutions and, 481-89
Viscometry
on polymer solutions, 493-94
Viscosity
bulk
corrsponding states and, 263
critical region and, 430
derivation of, 206-7
dielectric relaxation and, 160-61
fluorescence and, 312
of fused salts, 276-77
of hydrocarbon solutions, 439
hydrogen bonding and, 443
internal, 491, 492, 495
intrinsic
polymer solutions and, 490-94
stereoregularity and, 496
molecular weight and, 491, 494, 496
rotational diffusion constant and, 160

shear
dense fluids and, 254-56
derivation of, 215
for dilute gas, 260
Fokker-Planck equation and, 248
of sodium iodide, 36
stereoregularity and, 496
Visible spectroscopy
chemisorption and, 469
on fused salts, 294-95
Vitamin K
chloroplast activity and, 514
Volume
activation
crystals and, 266
excluded
polymers and 477-80
rheological properties and 489
free
polymer solutions and, 486
of molten salts, 293
partial molal
chlorofluorocarbon systems and, 438
hydrocarbon systems and 440
of hydrogen, 443
retention
in chromatography, 359
gas chromatography and, 459

W

Water
adsorption of, 454-55, 456, 457
hydrogen bonding and 468
in coordination spheres
resonance of, 313, 317-18
dielectric constant of, 155
dissociation of
pressure and, 316
evaporation of
control of, 179
in fused salts
solubility and, 293
heavy
see Deuterium oxide
magnetic properties of, 123
oxygen exchange of
inorganic complexes and, 319
photolysis of
photosynthesis and, 502, 509, 511-16
proton resonance of, 385
radiolysis of, 95-98
self-diffusion of, 384
thermodynamic properties of, 4
see also Ice
Wave function
for elements, 120-21
expansion theorems for, 116-17
force fields and, 342
polarizability and, 344
stationary states and, 109-13
Weed killer
photosynthesis and, 515
Whisker
crystal growth and, 422

X

Xanthophyll
epoxidation of, 524-25
X-ray diffraction
crystal dislocations and, 413
force constants and, 337
on fused salts, 296-97

Z

Zinc
liquid
alloys in, 444
vacancies in, 408
Zinc ion
in molten salt
self-diffusion of, 286
Zirconium
oxidation of, 418
Zone profile
chromatography and, 352-53, 363